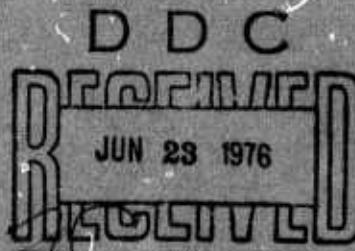


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## BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This is the Soviet Laser Bibliography for the fourth quarter of 1975 and is No. 22 in the series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; crystal growing; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; computer technology; holography; laser-induced chemical reactions; instrumentation and measurements; beam-target interaction; and plasma generation and diagnostics.		

### Introduction

This bibliography has been compiled by the staff of Informatics Inc. in response to a continuing contractual assignment to monitor current Soviet-bloc developments in the quantum electronics field. Of all material reviewed, the major yield has been from the approximately 30 periodicals which are known to report the most advanced and interesting findings in Soviet laser technology.

The period covered is the fourth quarter of 1975, and includes all significant laser-related articles received by us during that interval. The structure and selection criteria are basically those used in the preceding reports.

For convenience we have abbreviated frequently cited source names: a source abbreviation list is included. Unless indicated by a parenthesized (RZh, KL) notation, all cited sources are available at Informatics Inc. The numbers in parentheses following the authors' names in the text refer to the Cumulative Affiliations List which includes all author affiliations from 1969 to the present.

SOVIET LASER BIBLIOGRAPHY, OCTOBER - DECEMBER 1975

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## I. BASIC RESEARCH

### A. SOLID STATE LASERS

#### 1. Crystal: Ruby

1. Andreichev, V. A., B. B. Boyko, L. S. Korochkin, and S. A. Mikhnov (0). The "Impul's-3" single pulsed ruby laser. ZhPS, v. 23, no. 4, 1975, 741-744.
2. Gitlin, Ye. M., V. Ye. Matyushkov, S. A. Mikhnov, and V. N. Shumilin (0). The "Grom" single pulse ruby laser. ZhPS, v. 23, no. 6, 1975, 1115-1116.
3. Lavrovskiy, L. A., Yu. F. Morgun, and M. A. Muravitskiy (0). Narrow band single pulse ruby laser with a ring resonator. ZhPS, v. 23, no. 4, 1975, 609-616.
4. Varnavskiy, O. P., A. M. Leont'evich, and A. M. Mozharovskiy (1). Pulse shortening in a mode-locked ruby laser during artificial broadening of the generation spectrum and reduction of the relaxation time of the saturable filter. KE, no. 10, 1975, 2344-2346. (LC)

#### 2. Crystal: Rare-Earth Activated

##### a. Nd<sup>3+</sup>

5. Alfyorov, Zh. I., V. I. Bilak, D. Z. Garbuzov, N. Yu. Davidyuk, and M. F. Stel'makh (4). Study of the possibility of increasing the pulse power of a laser based on YAG:Nd<sup>3+</sup> with a semiconductor pump system. ZhTF P, no. 17, 1975, 773-775.

6. Arzumanov, V. N., N. M. Galaktionova, V. V. Gershun, G. F. Zaytsev, S. V. Kruzhakov, A. A. Mak, L. N. Pakhomov, and V. Yu. Petrun'kin (0). Single-frequency YAG:Nd<sup>3+</sup> laser stabilized by an active standard. KE, no. 8, 1975, 1824. (LC)
7. Bagdasarov, Kh. S., A. A. Kaminskiy, A. M. Kevorkov, L. Li, A. M. Prokhorov, T. A. Tevosyan, and S. E. Sarkisov (13, 1). Study of stimulated emission in cubic crystals of YScO<sub>3</sub>:Nd<sup>3+</sup>. DAN SSSR, v. 224, no. 4, 1975, 798-801.
8. Dianov, Ye. M., A. Ya. Karasik, V. B. Neustruyev, A. M. Prokhorov, and I. A. Shcherbakov (1). Direct measurement of the quantum yield of luminescence from the <sup>4</sup>F<sub>3/2</sub> metastable state of Nd<sup>3+</sup> in YAG crystals. DAN SSSR, v. 224, no. 1, 1975, 64-67.
9. Dmitriyev, V. G., Ye. A. Shalayev, and Ye. M. Shvom (0). Space-time and spectral characteristics of YAG:Nd laser radiation in a Q-switching regime. KE, no. 8, 1975, 1834. (LC).
10. Kaminskiy, A. A., V. A. Koptsik, Yu. A. Maskayev, I. I. Naumova, L. N. Rashkovich, and S. E. Sarkisov (0). Stimulated emission in Nd<sup>3+</sup> ions in a ferroelectric barium-sodium niobate (BNN) crystal. ZhTF P, no. 9, 1975, 439-443. (RZhF, 11/75, 11D1095)
11. Kaminskiy, A. A., and L. Li (13). The parameter of spectroscopic quality of laser media with Nd<sup>3+</sup> and Pm<sup>3+</sup> ions. ZhTF P, no. 12, 1975, 567-571.
12. Kaminskiy, A. A., G. A. Bogomolova, Kh. S. Bagdasarov, and A. G. Petrosyan (0). Luminescence, absorption and stimulated emission in Lu<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>-Nd<sup>3+</sup> crystals. OiS, v. 39, no. 6, 1975, 1119-1125.

13. Morozov, A. M., L. G. Morozova, V. A. Fedorov, and P. P. Feofilov (0). Spontaneous and stimulated emission in neodymium in lead fluophosphate crystals. OiS, v. 39, no. 3, 1975, 612-614.

b. Pr<sup>3+</sup>

14. Arsen'yev, P. A., K. E. Bienert, and A. V. Potemkin (0). Optical spectra of Pr<sup>3+</sup> in YAlO<sub>3</sub>. Physica status solidi, v. A26, no. 2, 1974, K113-K115. (RZhRadiot, 9/75, 9Yell0)

c. Er<sup>3+</sup>

15. Arsen'yev, P. A., Kh. V. Khasan, and M. V. Chukichev (0). Spectral characteristics of Er<sup>3+</sup> and Ho<sup>3+</sup> in a GdAlO<sub>3</sub> lattice under e-beam excitation. ZhPS, v. 23, no. 4, 1975, 725-729.

16. Morozov, A. M., I. G. Podkolzina, A. M. Tkachuk, V. A. Fedorov, and P. P. Feofilov (0). Luminescence and stimulated emission in binary erbium-lithium and holmium-lithium fluorides. OiS, v. 39, no. 3, 1975, 605-607.

d. Yb<sup>3+</sup>

17. Basiyev, T. T., Yu. K. Voron'ko, T. G. Mamedov, and I. A. Shcherbakov (1). Energy migration in Yb<sup>3+</sup> ions in garnet crystals. KE, no. 10, 1975, 2172-2182. (LC)

18. Bogomolova, G. A., D. N. Vylegzhannin, and A. A. Kaminskiy (13). Spectral-lasing studies of garnets with Yb<sup>3+</sup> ions. ZhETF, v. 69, no. 3, 1975, 860-874.

### 3. Semiconductor: Simple Junction

#### a. GaAs

19. Antoshin, M. K., Ye. M. Krasavina, I. V. Kryukova, V. I. Sluyev, and G. V. Spivak (141). Self-destruction of e-beam pumped GaAs lasers. KE, no. 9, 1975, 1969-1977.
20. Bykovskiy, Yu. A., I. G. Goncharov, K. B. Dedushenko, A. V. Kozhevnikov, V. N. Luk'yanov, A. F. Uzkiy, V. I. Shveykin, N. V. Shelkov, and S. D. Yakubovich (0). GaAs laser with distributed feedback and e-beam pumping. KE, no. 9, 1975, 1957-1962.
21. Grasyuk, A. Z., I. G. Zubarev, A. B. Mironov, and I. A. Poluektov (0). Spectrum of two-photon interzone absorption of laser radiation in a GaAs semiconductor. KE, no. 8, 1975, 1826. (LC)
22. Gusev, V. G., and B. N. Poyzner (47). Study of an injection laser in a laboratory workshop on quantum electronics. IVUZ Fiz, no. 9, 1975, 123-124.

#### b. InSb

23. Ambartsumyan, R. V., V. S. Dolzhikov, Yu. I. Milin'chuk, Ye. L. Mikhaylov, and N. V. Chekalin (0). Study of the characteristics of a magnetically tunable spin-flip laser. KE, no. 8, 1975, 1731-1736. (LC)

#### c. PbSe

24. Zasavitskiy, I. I., B. N. Matsonashvili, and A. P. Shotov (0). A c-w PbSe injection laser. ZhTF P, no. 7, 1975, 341-343. (RZhF, 10/75, 10D1116)

d. PbTe

25. Areshev, I. P., A. M. Darishevskiy, S. F. Kochegarov, and V. K. Subashiyev (4). Modulation of lasing in lead telluride by changing the polarization of the pumping radiation. ZhETF P, v. 22, no. 9, 1975, 437-441.

4. Semiconductor: Mixed Junction

26. Bogdankevich, O. V., N. A. Borisov, A. N. Georgobiani, V. B. Gutan, Z. I. Ilyukhina, B. M. Lavrushin, O. V. Matveyev, Ye. I. Panasyuk, V. F. Pevtsov, and N. L. Poletayev (1). Continuous tuning of lasing frequency in e-beam pumped lasers. KE, no. 10, 1975, 2231-2237. (LC)
27. Brodin, M. S., Z. A. Demidenko, K. A. Dmitrenko, and V. Ya. Reznichenko (0). Temperature dependence of the coefficient of two-photon absorption in  $\text{CdS}_{x}\text{Se}_{1-x}$  crystals near resonance. KE, no. 7, 1975, 1583. (LC)
28. Bryukner, F., Ya. T. Vasilev, V. S. Dneprovskiy, Ye. A. Zhukov, and D. G. Koshchug (2). Resonant excitation of excitons in a semiconductor by means of a laser with tunable pulse duration. KE, no. 10, 1975, 2350-2353. (LC)

5. Semiconductor: Heterojunction

29. Alfyorov, Zh. I., V. M. Andreyev, D. Z. Garbuzov, V. R. Larionov, and V. D. Rumyantsev (0). Reduction of pumping threshold levels in heterolasers, owing to efficient self-absorption of stimulated emission. ZhTF P, no. 9, 1975, 401-405. (RZhF, 11/75, 11D1102)
30. Alfyorov, Zh. I., I. N. Arsent'yev, D. Z. Garbuzov, and V. D. Rumyantsev (0). Red injection heterolasers based on a Ga-In-As-P system. ZhTF P, no. 9, 1975, 406-408. (RZhF, 11/75, 11D1103)

31. Bogatov, A. P., L. M. Dolginov, P. G. Yeliseyev, M. G. Mil'vidskiy, B. N. Sverdlov, and Ye. G. Shevchenko (1, 95). Radiative characteristics of laser heterostructures based on InP-GaInPAs. FTP, no. 10, 1975, 1956-1961.
32. Kurbatov, L. N., A. D. Britov, S. M. Karavayev, Yu. I. Gorina, G. A. Kalyuzhnaya, and P. M. Starik (0). PbSnTe-PbTe heterolaser at 10 $\mu$ .
33. Muszynski, Z. (NS). First domestic [Polish] heterojunction laser. Elektronika, no. 10, 1975, 403-407.
34. Vvedenskiy, B. S., A. S. Logginov, V. V. Randoshkin, and K. Ya. Senatorov (2). Spatial coherence of injection laser radiation. KE, no. 10, 1975, 2340-2343. (LC)

#### 6. Semiconductor: Theory

35. Aleksanyan, A. G., R. G. Aliakhverdyan, and Al. G. Aleksanyan (0). Semiconductor laser using intrazone transitions between magnetic film levels. KE, no. 8, 1975, 1643-1653. (LC)
36. Bogatkin, V. I., V. A. Kovalenko, and V. V. Shtykov (19). Output power and threshold characteristics of an e-beam pumped semiconductor laser. IN: Tr 1, 75-79. (RZhF, 10/75, 10D1117)
37. Jedrzejczak, A. (NS). Tunable infrared semiconductor lasers. PF, no. 1, 1975, 17-31.
38. Luk'yanov, V. N., A. T. Semenov, N. V. Shelkov, and S. D. Yakubovich (0). Lasers with distributed feedback (review). KE, no. 11, 1975, 2373-2398. (LC)
39. Rakocevic, S., and L. Stokic (NS). Optimizing the performance of semiconductor lasers. Nauc.-tehn. pregl. VTI, v. 25, no. 1, 1975, 45-58. (RZhF, 9/75, 9D883)

40. Yelesin, V. F., and V. V. Rusakov (16). Theory of the natural linewidth of a semiconductor laser. KE, no. 10, 1975, 2276-2281. (LC)
41. Zuyev, V. A., V. G. Litovchenko, and G. A. Sukach (6). Many-particle recombination processes on the surface and in thin layers of Si and Ge under laser excitation. FTP, no. 9, 1975, 1641-1648.

7. Glass: Nd

42. Dianov, Ye. M., A. A. Kut'yenkov, A. A. Manenkov, V. V. Osiko, A. M. Prokhorov, A. I. Ritus, and I. A. Shcherbakov (1). Intensity of Rayleigh scattering and nonradiative losses from the metastable state of Nd<sup>3+</sup> in laser silicate glass. ZhETF, v. 69, no. 2, 1975, 540-546.
43. Dianov, Ye. M., A. Ya. Karasik, L. S. Korniyenko, A. M. Prokhorov, and I. A. Shcherbakov (0). Measuring the cross-section of a lasing transition in neodymium glass. KE, no. 8, 1975, 1665-1670. (LC)
44. Dukhovnyy, A. M., A. A. Mak, B. M. Sedov, and T. V. Sokolova (0). Nd:glass laser with highly coherent radiation. KE, no. 11, 1975, 2521-2524. (LC)
45. Galich, G. A.. and V. I. Kravchenko (5). Nd:glass sweep laser with electrooptic tuning of the dispersion resonator. UFZh, no. 10, 1975, 1732-1735.
46. Galich, G. A., B. N. Grib, I. I. Kondilenko, P. A. Korotkov, V. I. Kravchenko, and O. N. Pogorelyy (0). Neodymium glass laser with electrooptic frequency control. KE, no. 8, 1975, 1807. (LC,

47. Kozhevnikov, N. M. (0). Beats between polarized oscillation modes in a neodymium glass laser. ZhTF P, no. 11, 1975, 515-517.  
(RZhF, 10/75, 10D1210)
48. Kozhevnikov, N. M., S. V. Kruzhakov, L. N. Pakhomov, and V. Yu. Petrun'kin (0). Polarization of laser radiation in neodymium glass in an automatic Q-switching regime. ZhTF, no. 11, 1975, 2461-2463.
49. Vyzhelevskiy, V. P., I. N. Dernova, V. V. Panteleyev, M. L. Petukh, O. I. Putrenko, O. F. Troshin, and A. A. Yankovskiy (0). The "Korall-1" laser for atomic spectral analysis. ZhPS, v. 23, no. 3, 1975, 515-521.

#### 8. Glass: Miscellaneous

50. Kalinin, V. N., A. A. Mak, D. S. Prilezhalev, and V. A. Fromzel' (0). Possibility of raising the brightness and specific energy yield in solid state lasers. ZhTF P, no. 10, 1975, 449-452. (RZhF, 10/75, 10D1121)

### B. LIQUID LASERS

#### 1. Organic Dyes

##### a. Rhodamine

51. Deryugin, L. N., O. I. Ovcharenko, V. Ye. Sotin, and T. K. Chekhlova (14). Rhodamine 6G thin-film laser using a waveguide with a corrugated substrate. KE, no. 9, 1975, 2073-2075.
52. Dyatlov, V. K., M. K. Dyatlov, V. F. Moskalenko, Ye. P. Ostapchenko, and Yu. M. Tsukanov (0). Optical pumping of a rhodamine 6G solution by a pulsed xenon laser. ZhPS, v. 23, no. 6, 1975, 1100-1102.

53. Kolbin, I. I., O. I. Ovcharenko, V. Ye. Sotin, and I. V. Cheremiskin (0). Thin-film rhodamine B laser with distributed feedback. KE, no. 7, 1975, 1581. (LC)
54. Shilov, V. B., N. S. Neporent, G. V. Lukomskiy, A. G. Spiro, and G. N. Antonevich (0). Spectral kinetics of lasing in solutions and relaxation processes in molecular dyes. KE, no. 9, 1975, 1885-1892.
55. Smirnov, V. S., Yu. Ye. Zabiyakin, and N. G. Bakhshiyev (0). Intermolecular interactions and stimulated emission spectra of activated liquid systems. Part 6. Effect of the solvent on the generation threshold of rhodamine 6G. OiS, v. 39, no. 3, 1975, 558-562.
56. Strizhnev, V. S. (0). Effect of pumping distribution on the energy and angular characteristics of lasing in a solution of rhodamine 6G in ethanol under flashlamp excitation. ZhPS, v. 23, no. 5, 1975, 784-790.
- b. Phthalimide
57. Gladchenko, L. F., and L. G. Pikulik (0). Spectral and generation features of 3-oxy-N-methylphthalimide. ZhPS, v. 23, no. 5, 1975, 828-831.
58. Gruzinskiy, V. V., and T. G. Staneva (0). Spectral and time dependence of radiation generated by phthalimide solutions. ZhPS, v. 23, no. 5, 1975, 820-827.
59. Pikulik, L. G., V. A. Yakovenko, and A. D. Das'ko (0). Generation of optical radiation in the gas phase using a new class of organic compounds. ZhPS, v. 23, no. 3, 1975, 493-494.

c. Polymethine

60. Babenko, V. A., V. I. Malyshev, A. A. Sychev, and A. N. Shibanov (1). Superluminescence in polymethine dye solutions from excitation by Nd laser radiation. KE, no. 9, 1975, 1923-1929.
61. Batishche, S. A., and V. A. Mostovnikov (3). Study of the degradation processes of excitation energy in polymethine dye molecules. IAN Fiz, no. 11, 1975, 2254-2258.
62. Melishchuk, M. V., and Ye. A. Tikhonov (5). Nonuniform broadening of absorption and fluorescence bands of polymethine dye solutions. IAN Fiz, no. 11, 1975, 2280-2284.
63. Przhonskaya, O. V., and Ye. A. Tikhonov (5). Possible mechanism of fluorescence from the second singlet state of polymethine dye molecules. IAN Fiz, no. 11, 1975, 2275-2279.

d. Coumarin

64. Dzyubenko, M. I., G. S. Vodotyka, V. V. Maslov, and V. M. Nikitchenko (0). Study of various spectral and energy characteristics of stimulated emission in a series of coumarin derivatives. OiS, v. 39, no. 3, 1975, 554-557.

e. Miscellaneous Dyes

65. Al'shits, Ye. I., R. I. Personov, and V. I. Stogov (72). Dependence of the fluorescence spectra of organic molecules in solid solutions on the wavelength of laser excitation. IAN Fiz, no. 9, 1975, 1918-1921.
66. Antonov, Ye. N., V. G. Koloshnikov, and V. R. Mironenko (0). Intraresonator absorption spectroscopy with a c-w dye laser. UFN, v. 117, no. 3, 1975, 574-576.

67. Bakhshiyyev, N. G. (0). Intermolecular interactions and stimulated emission spectra of activated liquid systems. Part 8. Interpretation of spectral-kinetic and threshold laws for stimulated emission in organic dye solutions under picosecond excitation. OiS, v. 39, no. 6, 1975, 1079-1085.
68. Belokon', M. V., and A. N. Rubinov (0). Effect of concentrations on the depth of dips in the generation spectrum of a dye laser, during recording of the Na and Ba absorption lines by the method of selective losses in the resonator. ZhPS, v. 23, no. 5, 1975, 779-783.
69. Bonch-Bruyevich, A. M., T. K. Razumova, and I. O. Starobogatov (7). Laser with a single-stage amplifier providing continuous tuning in the 400-1000 nm region. OMP, no. 9, 1975, 23-26.
70. Bonch-Bruyevich, A. M., T. K. Razumova, and I. O. Starobogatov (0). Laser with continuous tuning in the 400-1000 nm range. KE, no. 7, 1975, 1588. (LC)
71. Gruzinskiy, V. V., and S. V. Davydov (0). Effect of quenching of the triplet state on the lasing efficiency of an Na-fluorescein. ZhPS, v. 23, no. 6, 1975, 1009-1013.
72. Gruzinskiy, V. V., and N. M. Paltarak (3). Fine structure in the spectrum of stimulated emission in organic compound solutions. KE, no. 9, 1975, 2003-2007.
73. Kharlamov, B. M., R. I. Perso...v, and L. A. Bykovskaya (72). Stable "gap" in absorption spectra of solid solutions of organic molecules, induced by laser radiation. IAN Fiz, no. 9, 1975, 1922-1924.
74. Kozlov, N. P., and Yu. S. Protasov (24). Ultraviolet laser using organic dyes pumped by the plasma focus of a magnetoplasma compressor. PTE, no. 4, 1975, 169-171.

75. Leupold, D., R. Koenig, and S. Mory (NS). Dye laser with a wide tuning range. Patent GDR, no. 92291, issued 5 September 1972. (RZhRadiot, 10/75, 10Ye82)
76. Novikov, M. A., and A. D. Tertyshnik (0). Tunable dye laser with a narrow lasing spectrum. KE, no. 7, 1975, 1566. (LC)
77. Orlov, L. N., Ya. I. Nekrashevich, and S. S. Shevchenko (0). Molecular laser in the far infrared pumped by CO<sub>2</sub> laser radiation. IN: Sb 1, 121. (RZhRadiot, 10/75, 10Ye79)
78. Paltarak, N. M., and V. V. Gruzinskiy (3). Temperature dependence of the spectra of spontaneous and stimulated emission in various organic compound solutions. IAN Fiz, no. 11, 1975, 2378-2381.
79. Studenov, V. I., and N. G. Bakhshiyev (0). Intermolecular interactions and stimulated emission spectra of activated liquid systems. Part 7. Quantitative study of the effect of temperature and viscosity of the solvent on the threshold and generation spectrum of organic compound solutions. OiS, v. 39, no. 4, 1975, 661-665.
80. Vol, Ye. D., Yu. V. Naboykin, L. A. Ogurtsova, A. P. Podgornyy, and F. S. Pokrovskaya (36). Features of stimulated emission in ββ'-dinaphthylethylene in naphthalene at 4.2° K. IAN Fiz, no. 9, 1975, 1908-1912.
81. Yaroshenko, O. I., Ye. I. Rudik, L. G. Pikulik, and A. I. Maksimov (0). Problem of polarization of radiation from organic dye solution lasers. OiS, v. 39, no. 4, 1975, 745-749.
82. Zuyev, V. S., Yu. Yu. Stoylov, and K. K. Trusov (0). Study of lasing in POPOP vapor under optical pumping. ZhPS, v. 23, no. 6, 1975, 1003-1008.

## 2. Miscellaneous Liquids

83. Bakhshiyev, N. G., and O. P. Girin (0). Theory of amplification and generation of light by activated solutions, allowing for intermolecular relaxation processes. KE, no. 9, 1975, 2058-2060.
84. Gordiyets, B. F., Sh. S. Mamedov, and L. A. Shelepin (1). Vibrational relaxation and lasers using intramolecular vibrational transitions in liquids and molecular crystals. ZhETF, v. 69, no. 2, 1975, 467-476.
85. Naboykin, Yu. V., L. A. Ogurtsova, A. P. Podgornyy, and F. S. Pokrovskaya (0). Optical generation in impurity molecular crystals. KE, no. 7, 1975, 1561. (LC)
86. Tomin, V. I., and A. N. Rubinov (0). Electrochemiluminescent materials as a basis for developing a new type of laser. IAN Fiz, no. 11, 1975, 2346-2350.
87. Zhabotinskiy, M. Ye. (15). Laser liquids. Priroda, no. 9, 1975, 50-54.

## C. GAS LASERS

### 1. Simple Mixtures

#### a. He-Ne

88. Antipov, B. A., P. D. Pyrsikova, and V. A. Sapozhnikova (0). Short He-Ne laser with a wavelength of  $3.39 \mu$  in a transverse magnetic field. OiS, v. 39, no. 5, 1975, 932-937.
89. Arakelyan, S. M., S. A. Akhmanov, V. B. Pakhalov, and A. S. Chirkin (0). The limit spatial coherence of gas lasers and its use in physical experiments. IN: Sb 1, 76-78. (RZhRadiot, 10/75, 10Ye44)

90. Bagayev, S. N., and L. S. Vasilenko (0). Progress in developing highly frequency-stable gas lasers. IN: Sb 1, 83-84. (RZhRadiot, 10/75, 10Ye45)
91. Basayev, A. B., M. I. Molchanov, and N. G. Yaroshenko (0). Excited plasma oscillations in He-Ne lasers. ZhTF, no. 9, 1975, 1929-1933.
92. Bobrik, V. I., Yu. D. Kolomnikov, and B. S. Mogil'nitskiy (0). He-Ne laser with an absorption cell in natural iodine. IN: Sb 1, 92-93. (RZhRadiot, 11/75, 11Ye72)
93. Borisova, M. S., I. P. Mazan'ko, and G. A. Petrashko (0). Study of the sensitivity of a helium-neon laser, operating at the  $3s_2 - 2p_4$  and  $3s_2 - 3p_4$  bound transitions of neon, to oscillations of the discharge current. KE, no. 9, 1975, 2008-2012.
94. Bulygin, A. S., and V. P. Kapralov (0). Synchronization of radiation from an He-Ne laser with a passive r-f frequency standard using a beam of  $^{133}\text{Cs}$  atoms. IN: Sb 1, 103-104. (RZhRadiot, 10/75, 10Ye42)
95. Burnashev, M. N., Yu. G. Zakharenko, and V. Ye. Privalov (163). Effect of striations on the modulation of radiation from an He-Ne laser with a double-anode tube. IVUZ Radiofiz, no. 11, 1975, 1638-1641.
96. Gelikonov, V. M., Yu. I. Zaytsev, and P. A. Khandokhin (8). Radiation characteristics of a three-mode He-Ne laser in a self-locking region. KE, no. 10, 1975, 2255-2260. (LC)
97. Gonchukov, S. A., V. N. Petrovskiy, and Ye. D. Protsenko (0). Frequency stabilization of a two-mode gas laser. IN: Sb 1, 94. (RZhRadiot, 10/75, 10Ye58)

98. Gruzinskiy, V. V., and L. K. Stratskevich (0). Gas laser with an active element having isotropic polarization. ZhPS, v. 23, no. 3, 1975, 489-492.
99. Gus'kov, L. N., and B. I. Troshin (0). Study of the dynamic characteristics of an He-Ne laser at  $0.63 \mu$ . OiS, v. 39, no. 5, 1975, 925-931.
100. Gus'kov, L. N., V. P. Sologub, and B. I. Troshin (0). Study of the low-frequency spectrum of intensity oscillations in an He-Ne laser at  $0.63 \mu$ , with an external modulation signal on the discharge plasma. IN: Sb 1, 95-96. (RZhRadiot, 11/75, 11Ye67)
101. Im Tkhek-de, and V. P. Timofeyev (0). Noise suppression in a single frequency tunable He-Ne laser. ZhPS, v. 23, no. 4, 1975, 624-628.
102. Karabut, E. K., V. F. Kravchenko, and V. S. Mikhalevskiy (0). Measuring the concentration of metastable helium atoms in a pulsed direct current discharge. ZhPS, v. 23, no. 6, 1975, 1089-1091.
103. Kasel'skiy, V. A., Ye. P. Ostapchenko, and V. A. Stepanov (0). Amplitude fluctuations in He-Ne lasers and methods for reducing them. IN: Sb 1, 99-100. (RZhRadiot, 11/75, 11Ye61)
104. Kats, M. L., V. A. Sedel'nikov, and V. V. Tuchin (0). Possibility of determining the lifetime of metastable levels of helium and neon in the discharge of an He-Ne gas laser at  $6328 \text{ \AA}$ . IN: Sb 2, 15-18. (RZhF, 11/75, 11D1186)
105. Koronkevich, V. P., and V. A. Khanov (0). Study of the spectral characteristics of He-Ne laser radiation stabilized by the Lamb dip. Avtometriya, no. 5, 1975, 73-80.

106. Koshelyayevskiy, N. B., and A. N. Titov, and V. M. Tatarenkov (0). Power frequency shift in an He-Ne/CH<sub>4</sub> laser. IN: Sb 1, 87. (RZhRadiot, 11/75, 11Ye63)
107. Popov, A. I., and Ye. D. Protsenko (118). Amplification at a laser transition of 5s'[1/2]<sub>1</sub><sup>0</sup> - 4p'[3/2]<sub>2</sub> in neon with a wavelength of 3.39 μ. KE, no. 9, 1975, 2106-2107.
108. Privalov, V. Ye. (0). Pesonant character of the modulation characteristics of a gas laser. IN: Sb 1, 101-102. (RZhRadiot, 10/75, 10Ye43)
109. Sologub, V. P., and B. I. Troshin (0). Limit radiation characteristics of a 0.63 μ He-Ne laser. IN: Sb 1, 97-98. (RZhRadiot, 11/75, 11Ye69)
110. Zakharenko, Yu. G., and V. Ye. Privalov (0). Effect of oscillations in the discharge on radiation from small He-Ne lasers. IN: Sb 3, 155-166. (RZhF, 11/75, 11D1125)

b. He-Se

111. Telbizov, P. K., and N. V. Subotinov (NS). Construction of an He-Se laser. PTE, no. 5, 1975, 178-179.

2. Molecular Beam and Ion

a. CO<sub>2</sub>

112. Akhmanov, S. A., G. A. Lyakhov, and Yu. V. Ponomarev (0). Distributed feedback in high pressure gas lasers. IN: Sb. 1, 116-117. (RZhRadiot, 10/75, 10Ye24)

113. Andreyev, S. I., I. M. Belousova, P. N. Dashuk, D. Yu. Zaroslov, Ye. A. Zobov, N. V. Karlov, G. P. Kuz'min, S. M. Nikiforov, A. M. Prokhorov, A. N. Sidorov, L. L. Chelnokov, and M. D. Yarysheva (0). Plasma-ribbon CO<sub>2</sub> laser. "N: Sb 1, 29. (RZhRadiot, 11/75, 11Ye49)
114. Appelt, G. (NS). Gas discharge device designed for a CO<sub>2</sub> laser. Patent GDR, no. 92503, issued 12 September 1972. (RZhRadiot, 9/75, 9Ye10)
115. Atanassov, P. A. (NS). Effect of small quantities of organic vapors on a CO<sub>2</sub> laser plasma. DBAN, no. 9, 1975, 1183-1186.
116. Bagratashvili, V. N., I. N. Knyazev, and V. V. Lobko (0). Wideband continuous frequency tuning of a high-pressure CO<sub>2</sub> laser. KE, no. 7, 1975, 1577. (LC)
117. Baranov, V. Yu., V. M. Borisov, A. A. Vedenov, A. P. Napartovich, and A. P. Strel'tsov (0). Plasma homogeneity and relaxation processes in a CO<sub>2</sub> laser with transverse excitation. ZhTF, no. 11, 1975, 2343-2352.
118. Baranov, V. Yu., V. M. Borisov, Yu. A. Satov, and Yu. Yu. Stepanov (0). Obtaining a uniform discharge for a large volume pulsed CO<sub>2</sub> laser. KE, no. 9, 1975, 2086-2088.
119. Bashkin, A. S., A. N. Orayevskiy, V. N. Tomashov, and N. N. Yuryshev (1). Study of the energy characteristics of a chemical CO<sub>2</sub> laser using a mixture of O<sub>3</sub>+D<sub>2</sub>+CO<sub>2</sub>. KE, no. 9, 1975, 2092-2095.
120. Bashkin, A. S., A. N. Orayevskiy, V. N. Tomashov, and N. N. Yuryshev (1). Effect of cooling on the performance of a chemical CO<sub>2</sub> laser using a mixture of O<sub>3</sub>+D<sub>2</sub>+CO<sub>2</sub>. KE, no. 11, 1975, 2534-2536. (LC)

121. Basov, N. G., V. A. Danilychev, A. A. Ionin, I. B. Kovsh, V. A. Sobolev, A. F. Suchkov, and B. M. Urin (1). Study of the energy parameters of CO<sub>2</sub> electroionization lasers. KE, no. 11, 1975, 2458-2466. (LC)
122. Bazarov, Ye. N., G. A. Gerasimov, V. P. Gubin, and Yu. I. Posudin (0). Study of frequency stability in a CO<sub>2</sub> laser with an external nonlinear OsO<sub>4</sub> absorption cell. IN: Sb 1, 96. (RZhRadiot, 11/75, 11Yel8)
123. Bazarov, Ye. N., G. A. Gerasimov, and Yu. I. Posudin (15). Chemical reactions from electric discharge in molecular gas lasers. KE, no. 11, 1975, 2481-2486. (LC)
124. Bugayev, S. P., Yu. I. Bychkov, Ye. K. Karlova, N. V. Karlov, B. M. Koval'chuk, G. P. Kuz'min, Yu. A. Kurbatov, G. A. Mesyats, V. M. Orlovskiy, A. M. Prokhorov, and A. M. Rybalov (0). Pulsed CO<sub>2</sub> laser with energy of 500 joules. ZhTF P, no. 10, 1975, 492-496. (RZhF, 10/75, 10D1144)
125. Burtsev, V. A., L. V. Dubovoy, A. A. Kondakov, N. Yu. Lebedev, V. F. Poponin, and V. F. Shanskiy (0). Study of the lasing characteristics of a CO<sub>2</sub> laser pumped by a non-selfsustained discharge controlled by an e-beam. IN: Sb 1, 132. (RZhRadiot, 10/75, 10Yel5)
126. Dubovoy, L. V., V. A. Zaytsev, and V. P. Poponin (0). Effect of an admixture of hydrogen on the generation efficiency of a pulsed CO<sub>2</sub> laser excited by a non-selfsustaining discharge. ZhTF P, no. 9, 1975, 411-415. (RZhF, 10/75, 10D1152)
127. Dubovoy, L. V., V. A. Zaytsev, V. P. Poponin, and V. F. Shanskiy (0). Selection of optimal pumping frequency for a pulsed CO<sub>2</sub> laser with a non-selfsustaining discharge. KE, no. 7, 1975, 1415-1418. (LC)

128. D'yakov, A. S., A. K. Piskunov, and Ye. M. Cherkasov (0). Theoretical study of vibrational relaxation of CO<sub>2</sub> molecules in mixtures containing CO. KE, no. 7, 1975, 1419-1422. (LC)
129. Galaktionov, I. I., V. Yu. Gorelov, and I. V. Podmoshenskiy (0). Photoionized CO<sub>2</sub> laser operating in an ionizing amplification regime. IN: Sb 1, 30. (RZhRadiot, 10/75, 10Ye16)
130. Generalov, N. A., V. P. Zimakov, V. D. Kosynkin, Yu. P. Rayzer, and D. I. Roytenburg (0). Method for substantially improving the stability limit of the discharge in large-size fast-flow lasers. ZhTF P, no. 9, 1975, 431-435. (RZhF, 11/75, 11D1145)
131. Ishchenko, V. N., V. N. Lisitsyn, V. P. Safonov, and A. R. Sorokin (0). High-pressure electric discharge CO<sub>2</sub> laser. KE, no. 7, 1975, 1374-1378. (LC)
132. Karlov, N. V. (0). Problems in developing high-energy pulsed CO<sub>2</sub> lasers. IN: Sb 1, 25. (RZhRadiot, 10/75, 10Ye25)
133. Karlov, N. V., N. A. Karpov, I. O. Kovalev, G. P. Kuz'min, and A. M. Prokhorov (0). Tuning of a high power pulsed CO<sub>2</sub> laser in the 9.6 μ region. IN: Sb 1, 39. (RZhRadiot, 10/75, 10Ye20)
134. Karlov, N. V., N. A. Karpov, I. O. Kovalev, G. P. Kuz'min, and A. M. Prokhorov (1). Tuning of a high power pulsed CO<sub>2</sub> laser in the 9 micron region. KE, no. 9, 1975, 2079-2081.
135. Karnyushin, V. N., B. A. Knyazev, A. N. Malov, and R. I. Soloukhin (0). Role of gasdynamic and relaxation processes in flow-through high-pressure gas-discharge CO<sub>2</sub> lasers. IN: Sb 1, 36. (RZhRadiot, 10/75, 10Ye10)
136. Karnyushin, V. N., A. N. Malov, and R. I. Soloukhin (0). Pulsed gas discharge CO<sub>2</sub> laser at atmospheric pressure with a hot cathode. KE, no. 8, 1975, 1822. (LC)

137. Kiselevskiy, L. I., D. K. Skutov, and S. A. Sokolov (0). Effect of mixing of gas flows on the gain of a CO<sub>2</sub> laser under induction heating. IN: Sb 1, 127. (RZhRadiot, 10/75, 10Ye7)
138. Kuklev, Yu. I., and A. A. Uglov (0). Intense source of laser IR radiation (review). FiKhOM, no. 2, 1975, 3-19. (LC)
139. Likal'ter, A. A. (74). Laser based on transitions between levels of coupled modes of CO<sub>2</sub>. KE, no. 11, 1975, 2399-2402. (LC)
140. Mazurenko, Yu. T., Yu. A. Rubinov, and P. A. Shakhverdov (0). Triggering a uniform discharge in a CO<sub>2</sub> laser at atmospheric pressure by electrons distributed at the surface of the cathode, and by photoelectrons in the interior of the gas medium. IN: Sb 1, 40. (RZhRadiot, 10/75, 10Ye11)
141. Mazurenko, Yu. T., Yu. A. Rubinov, and P. A. Shakhverdov (0). New method for excitation of a homogeneous discharge in high-pressure CO<sub>2</sub> lasers. KE, no. 10, 1975, 2335-2338. (LC)
142. Muratov, Ye. A., V. D. Pis'mennyy, and A. T. Rakhimov (0). Ultraviolet-pumped high-power CO<sub>2</sub> laser operating in a long pulse regime. IN: Sb 1, 133. (RZhRadiot, 11/75, 11Ye2)
143. Petrova, M. D. (NS). Effect of oxygen on the average power of sealed-off TEA CO<sub>2</sub> lasers. Bolg. fiz. zh., v. 2, no. 1, 1975, 74-78. (RZhRadiot, 11/75, 11Ye15)
144. Ponomarenko, A. G., R. I. Soloukhin, and V. N. Tishchenko (0). Optimization and limit characteristics of CO<sub>2</sub> lasers. ZhPMTF, no. 5, 1975, 120-131.
145. Provorov, A. S. (0). High pressure tunable c-w CO<sub>2</sub> laser. IN: Sb 1, 35. (RZhRadiot, 10/75, 10Ye19)

146. Solov'yev, V. S., and V. M. Babich (0). Study of resonant fluorescence at the  $00^01-00^00$  transition, with the purpose of stabilizing the mean frequency of a  $\text{CO}_2$  laser. IN: Sb 1, 91. (RZhRadiot, 10/75, 10Ye14)
  147. Stefanov, V. I., and M. D. Petrova (NS). Time behavior of a TEA  $\text{CO}_2$  laser pulse, using pure  $\text{CO}_2$  and with added hydrogen and nitrogen. Bolg. fiz. zh., v. 2, no. 1, 1975, 67-73. (RZhF, 11/75, 11D1143)
  148. Surdutovich, G. I. (0). Lasing dynamics of a  $\text{CO}_2$  laser with nonlinear absorption. IN: Sb 1, 139-140. (RZhRadiot, 10/75, 10Ye21)
  149. Vasilenko, L. S., A. A. Kovalev, A. S. Provorov, and V. P. Chebotayev (10). Shock broadening of the  $P20$  line of the  $00^01-10^00$  transition of  $\text{CO}_2$ , measured with a tunable  $\text{CO}_2$  laser. KE, no. 11, 1975, 2528-2530. (LC)
  150. Zakharenko, Yu. G., V. Ye. Privalov, Ye. A. Smirnov, and V. V. Chernigovskiy, (0). Oscillations in the discharge of a  $\text{CO}_2$  laser. IN: Sb 3, 147-155. (RZhF, 11/75, 11D1144)
  151. Zemtsov, Yu. K., A. S. Kovalev, I. G. Persiantsev, V. M. Polushkin, V. D. Pis'mennyy, and A. T. Rakhimov (0). Hydrogen as an effective substitute for helium in  $\text{CO}_2$  lasers operating in a non-selfsustaining discharge regime. IN: Sb 1, 28. (RZhRadiot, 10/75, 10Ye22)
- b.  $\text{CO}$
152. Alekseyev, B. V., N. M. Dolgov, and V. V. Sokovikov (0). Vibrational and graduated temperature of a gas in the electric discharge tube of a  $\text{CO}$  laser. IN: Sb 1, 126. (RZhRadiot, 11/75, 11Ye86)

153. Lotkova, E. N., V. V. Pisarenko, and N. N. Sobolev (0). Generation spectrum, amplification and selection of generation lines in a water-cooled CO laser. ZhPS, v. 23, no. 6, 1975, 988-994.
154. Ochkin, V. N., N. N. Sobolev, and E. A. Trubacheyev (0). Destruction of laser levels by CN radicals in a CO electric discharge laser. IN: Sb 1, 125. (RZhRadiot, 11/75, 11Ye24)
155. Pukhal'skaya, G. V., G. P. Zhitneva, S. Ya. Pshezhetskiy, A. L. Yevseyenko, and N. V. Zikeyeva (0). Study of the relationship of lasing in CO molecules with a kinetic reaction in a  $C_3O_2 + O_3$  mixture under photo-excitation. KE, no. 8, 1975, 1701-1709. (LC)
156. Sobolev, N. N. (0). Physical processes in CO lasers. IN: Sb 1, 122. (RZhRadiot, 11/75, 11Ye35)
- c. Noble Gas
157. Baranov, M. D., S. G. Burdin, V. A. Danilychev, and O. M. Kerimov (1). Experimental study on the kinetics of forming excited  $Xe_2$  molecules in a compressed xenon laser. KE, no. 9, 1975, 1997-2002.
158. Basov, N. G., A. N. Brunin, V. A. Danilychev, V. A. Dolgikh, O. M. Kerimov, A. N. Lobanov, S. I. Sagitov, and A. F. Suchkov (1). High pressure ultraviolet laser using an Ar+N<sub>2</sub> mixture. KE, no. 10, 1975, 2238-2242. (LC)
159. Kartaleva, S. S., O. S. Zaroslova, and L. Ye. Grin' (0). Effects of slow onset of generation in an argon ion laser. ZhPS, v. 23, no. 4, 1975, 629-632.

160. Kochubey, S. A., V. N. Lisitsyn, A. R. Sorokin, and P. L. Chapovskiy (0). Study of a high pressure He-Ar laser using  
 $^2P_{10}-^1S$  transitions of Ar(I). IN: Sb 1, 151. (RZhRadiot,  
10/75, 10Ye50)
161. Yegorov, O. K., D. P. Krindach, M. I. Landman, B. I. Nazarov,  
and V. M. Salimov (2). Time structure of lasing in an argon laser  
during mode lock. ZhETF, v. 69, no. 2, 1975, 535-539.
- d. D<sub>2</sub>O
162. Dominin, Yu. S., V. M. Tatarenkov, and P. S. Shumyatskiy (0).  
D<sub>2</sub>O laser for absolute frequency measurements. KE, no. 8,  
1975, 1818. (LC)
- e. CaH
163. Monastyrev, S. S., and V. Ye. Prokop'yev (0). Study of the  
mechanism for producing stationary inversion in a calcium-hydrogen  
laser. IN: Sb 1, 150. (RZhRadiot, 11/75, 11Ye70)
- f. H<sub>2</sub>
164. D'yakov, Yu. Ye., and B. G. Sartakov (0). Population at an upper  
vibration level of the medium in a gas combination laser.  
IN: Sb 1, 119. (RZhRadiot, 10/75, 10Ye120)
165. Grasyuk, A. Z., I. G. Zubarev, A. V. Kotov, and V. G. Smirnov(0).  
Compressed hydrogen Raman laser in the infrared. IN: Sb 1, 118.  
(RZhRadiot, 10/75, 10Ye119)

g. N<sub>2</sub>

166. Basov, N. G., L. A. Vasil'yev, V. A. Danilychev, G. G. Dolgov-Savel'yev, V. A. Dolgikh, O. M. Kerimov, L. L. Kozorovitskiy, V. K. Orlov, and D. D. Khodkevich (0). High-pressure gas laser in the violet spectral region based on molecular nitrogen ions. KE, no. 7, 1975, 1591. (LC)
167. Borzenko, B. A., N. V. Karelov, A. K. Rebrov, and R. G. Sharafutdinov (0). Experimental study of the population at rotational levels in nitrogen during broadening. IN: Sb 1, 17-18. (RZhRadiot, 11/75, 11Ye50)
168. Bychkov, Yu. I., V. F. Losev, V. V. Savin, and V. F. Tarasenko (78). Improving the efficiency of an N<sub>2</sub> laser. KE, no. 9, 1975, 2047-2053.
169. Ishchenko, V. N., V. N. Lisitsyn, A. M. Razhev, V. N. Starinskiy, and P. L. Chapovskiy (0). High-pressure gas-discharge laser using 1<sup>-</sup> transitions of the band system of the N<sub>2</sub><sup>+</sup> molecule. IN: Sb 1, 7. (RZhRadiot, 10/75, 10Ye28)
170. Ishchenko, V. N., V. N. Lisitsyn, A. M. Razhev, and V. N. Starinskiy (0). Possibility of developing high power ultraviolet nitrogen lasers. IN: Sb 1, 153. (RZhRadiot, 10/75, 10Ye27)
171. Ishchenko, V. N., V. N. Lisitsyn, A. M. Razhev, and V. N. Starinskiy (0). Ultraviolet nitrogen laser with a power of 0.5 watts. KE, no. 8, 1975, 1777-1781. (LC)
172. Kechkemeti, I., B. Rats, Zh. Bor, and L. Kozma (NS). Study of a nitrogen laser with transverse discharge. Acta technica Academiae scientiarum hungaricae, v. 80, no. 1-2, 1975, 55-59. (RZhF, 10/75, 10D1136)

173. Lisitsyn, V. N., A. R. Sorokin, and G. G. Telegin (0).  
Study of infrared generation in an N<sub>2</sub> laser with transverse discharge. KE, no. 8, 1975, 1710-1716. (LC)
174. Sokhor, V., P. Engst, and P. Mraz (0). Dynamics of a superradiative N<sub>2</sub> laser. IN: Sb 1, 152. (RZhRadiot, 11/75, 11Ye20)
- h. Submillimeter
175. Dyubko, S. F., V. A. Svich, and L. D. Fesenko (34).  
Submillimeter laser using HCOOH, DCOOH, HCOOD and DCOOD molecules. ZhTF, no. 11, 1975, 2458-2461.
176. Dyubko, S. F., V. A. Svich, and L. D. Fesenko (0).  
Submillimeter ClO<sub>2</sub> paramagnetic molecular laser with magnetic field sensitivity. ZhTF P, no. 9, 1975, 409-411. (RZhF, 11/75, 11Zh34)
177. Dyubko, S. F., V. A. Svich, and L. D. Fesenko (34).  
Experimental study of the radiation spectrum of a submillimeter laser using CD<sub>3</sub>OH molecules. IVUZ Radiofiz, no. 10, 1975, 1434-1437.
178. Kutovoy, V. D., Ye. V. Lesnikov, N. V. Nikitin, G. D. Petrov, and P. A. Samarskiy (140). Pulsed submillimeter laser for diagnosing the optics of a dense plasma. KE, no. 9, 1975, 2066-2068.
179. Tarasenko, V. F. (78). Generator for excitation of pulsed lasers with axial discharge. PTE, no. 5, 1975, 180-181.

i. Metal Vapor

180. Abrosimov, G. V., V. V. Vasil'tsov, and V. D. Pis'mennyy (0). Study of a Cu(I) laser using copper chloride. IN: Sb 1, 165. (RZhRadiot, 10/75, 10Ye37)
181. Akirtava, O. S., V. L. Dzhikiya, and Yu. M. Oleynik (0). Laser based on transitions of Cu(I) in copper halide vapor. KE, no. 8, 1975, 1831. (LC)
182. Aleksandrov, I. S., Yu. A. Babeyko, A. A. Babayev, O. I. Buzhinskiy, L. A. Vasil'yev, A. V. Yefimov, S. I. Krysanov, G. N. Nikolayev, A. A. Slivitskiy, A. V. Sokolov, L. V. Tatarintsev, and V. S. Tereshchenkov (0). Obtaining lasing in copper vapor with a transverse discharge. KE, no. 9, 1975, 2077-2079.
183. Aleynikov, V. S., G. N. Tolmachev, Ye. L. Latush, and V. S. Mikhalevskiy (325). Spectral characteristics of a cadmium-helium laser. ZhTF, no. 9, 1975, 1980-1982.
184. Bokhan, P. A., V. D. Burlakov, V. A. Gerasimov, V. I. Solomonov, and V. Ye. Prokop'yev (0). Observation of spin-orbital relaxation in gas lasers based on manganese and europium vapors. IN: Sb 1, 145. (RZhRadiot, 10/75, 10Ye57)
185. Boyarskiy, K. K., and Ye. N. Kotlikov (0). Determining the lifetime of operating levels of pulsed lasing in cadmium vapor at 1.433  $\mu$ , using an intersection method. IN: Sb 1, 156. (RZhRadiot, 11/75, 11Ye76)
186. Isayev, A. A., M. A. Kazaryan, S. V. Markova, G. G. Petrash, and V. M. Cherezov (0). Gas lasers using atomic and ion transitions. IN: Sb 1, 141. (RZhRadiot, 10/75, 10Ye38)

187. Karabut, E. K., V. F. Kravchenko, V. S. Mikhalevskiy, and A. P. Shelepo (325). Study of lasing at ion transitions of strontium in a mixture with hydrogen. KE, no. 11, 1975, 2514-2515. (LC)
188. Korolev, F. A., A. I. Odintsov, and T. V. Feofilaktova (0). Parameters of the active medium of an He-Cd<sup>+</sup> laser. ZhPS, v. 23, no. 5, 1975, 799-803.
189. Krasil'nikov, S. S. (2). Method for producing population inversion at a resonant ion transition. ZhTF P, no. 12, 1975, 574-578.
190. Mizeraczyk, J. (NS). Metal vapor ion lasers. Pr. Inst. masz. przep. PAN, no. 65, 1974, 63-106. (RZhF, 10/75, 10D1131)
191. Shevera, V. S., M-T. I. Soskida, and I. P. Zapesochnyy (0). Study of physical processes and of the mechanism for obtaining population inversion in a helium-cadmium laser. IN: Sb 1, 157-158. (RZhRadiot, 11/75, 11Ye74)
192. Shuktin, A. M., V. G. Mishakov, G. A. Fedotov, and A. A. Ganeyev (0). Observation of dissociation of copper halide molecules in a pulsed discharge by an interference method. OiS, v. 39, no. 4, 1975, 785-786.
193. Shuktin, A. M., G. A. Fedotov, and V. G. Mishakov (0). Stimulated emission from Cu(I) lines using copper bromide vapor. OiS, v. 39, no. 6, 1975, 1186-1187.
194. Soskida, M-T. I., and V. S. Shevera (136). Study of overcharging of He<sup>+</sup>, Ne<sup>+</sup> and Ar<sup>+</sup> in Beutler states of cadmium and zinc ions at low energies. ZhETF P, v. 22, no. 11, 1975, 545-549.
195. Subotinov, N. V., S. D. Kalchev, and P. K. Telbizov (NS). Copper vapor laser with a high frequency pulse rate. KE, no. 8, 1975, 1833. (LC)

196. Zemskov, K. I., A. A. Isayev, M. A. Kazaryan, G. G. Petrash, S. G. Rautman, and A. M. Shalagin (0). Obtaining diffraction dispersion with pulsed lasers having short inversion times. IN: Sb 1, 142. (RZhRadiot, 11/75, 11Ye55)
197. Zemskov, K. I., A. A. Isayev, M. A. Kazaryan, and G. G. Petrash (0). Using the active medium of metal vapor lasers as an amplifier of beams carrying optical information. IN: Sb 1, 159. (RZhRadiot, 11/75, 11Ye59)
198. Zhukov, V. S., V. S. Kucherov, Ye. L. Latush, and M. F. Sem (0). Recombination laser transitions in metal vapors. IN: Sb 1, 146. (RZhRadiot, 10/75, 10Ye39)
199. Zhukov, V. V., V. G. Il'yushko, Ye. L. Latush, and M. F. Sem (0). Pulsed lasing in beryllium vapor. KE, no. 7, 1975, 1409-1414. (LC)

j. Gasdynamic

200. Abrosimov, G. V., A. A. Vedenov, A. F. Vitshas, A. P. Napartovich, and V. F. Sharkov (23). Obtaining generation of high power infrared radiation in a gasdynamic CO<sub>2</sub> laser near the threshold drag temperatures. TVT, no. 4, 1975, 865-866.
201. Abrosimov, G. V., R. A. Dmiterko, T. Ye. Popova, and V. F. Sharkov (0). Gasdynamic CO<sub>2</sub> laser with temperature braking of the operating mixture below 750 K. IN: Sb 1, 164. (RZhRadiot, 10/75, 10Ye65)
202. Basiyev, A. G., T. Ye. Popova, and V. F. Sharkov (0). Use of special chemical admixtures in place of water and helium in a gasdynamic CO<sub>2</sub> laser. IN: Sb 1, 163. (RZhRadiot, 10/75, 10Ye67)

203. Biryukov, A. S., A. Yu. Volkov, A. I. Demin, Ye. M. Kudryavtsev, Yu. A. Kulagin, N. N. Sobolev, and L. A. Shelepin (0). Gasdynamic N<sub>2</sub>O laser. IN: Sb 1, 14. (RZhRadiot, 10/75, 10Ye64)
204. Britan, A. B., and N. M. Kortsenshteyn (248). Condensation of water vapor in a gasdynamic CO<sub>2</sub> laser. KE, no. 11, 1975, 2536-2537. (LC)
205. Golubev, S. A., A. S. Kovalev, N. V. Moiseyenko, Ye. Ye. Myshetskaya, I. G. Persiantsev, V. D. Pis'mennyy, A. T. Rakhimov, and A. P. Favorskiy (0). Gasdynamic processes in a high-pressure fast-flow CO<sub>2</sub> laser operating in a repetitive pulse regime. IN: Sb 1, 37. (RZhRadiot, 11/75, 11Ye94)
206. Kochelap, V. A., and Yu. A. Kukibnyy (0). Gasdynamic photorecombination lasers. KE, no. 7, 1975, 1471-1480. (LC)
207. Konyukhov, V. K., A. M. Prokhorov, V. I. Tikhonov, V. N. Fayzulayev, and P. O. Shishkov (0). Gasdynamic water vapor condensation laser. IN: Sb 1, 13. (RZhRadiot, 10/75, 10Ye69)
208. Konyukhov, V. K., and V. N. Fayzulayev (0). Kinetics of water vapor condensation and relaxation processes in a gasdynamic CO<sub>2</sub> laser. IN: Sb 1, 131. (RZhRadiot, 10/75, 10Ye68)
209. Konyukhov, V. K., A. M. Prokhorov, V. I. Tikhonov, and V. N. Fayzulayev (1). Gasdynamic water-vapor condense-laser. KE, no. 9, 1975, 2076-2077.
210. Losev, S. A., and V. N. Makarov (0). High power gasdynamic laser at high pressure. ZhPMTF, no. 4, 1975, 3-7.
211. Losev, S. A., and V. N. Makarov (0). Multifactor optimization of a gasdynamic CO<sub>2</sub> laser. Part 1. Optimization of gain. KE, no. 7, 1975, 1454-1458. (LC)

212. Luk'yanov, G. A. (0). Plasmadynamic lasers using supersonic jet flows. IN: Sb 1, 53-54. (RZhRadiot, 11/75, 11Ye88)
213. Makarov, V. N., and S. A. Losev (0). Effect of impurities on optical gain in the relaxation of a gas in a supersonic jet nozzle. FGIV, no. 5, 1975, 804-807.
214. Pekar, S. I., V. A. Kochelap, and Yu. A. Kukibnyy (0). Plasma and recombination lasers. IN: Sb 1, 50. (RZhRadiot, 10/75, 10Ye70)
215. Shmelev, V. M., and A. D. Margolin (0). Gasdynamic lasers with optical pumping. KE, no. 7, 1975, 1445-1448. (LC)
216. Shmelev, V. M., and A. D. Margolin (0). Heterogeneous losses in gasdynamic lasers. KE, no. 8, 1975, 1749-1756. (LC)
217. Soloukhin, R. I. (0). Development of gasdynamic methods for obtaining inversion. IN: Sb 1, 12. (RZhRadiot, 11/75, 11Ye93)
218. Testov, V. G., and Yu. I. Grin' (0). Study of the amplifier properties of an  $N_2O$ -CO-He mixture in a gasdynamic regime. IN: Sb 1, 15. (RZhRadiot, 11/75, 11Ye46)
219. Vargin, A. N., N. A. Ganina, V. K. Konyukhov, A. I. Lukovnikov, and V. I. Selyakov (0). Gasdynamic method for producing inversion in rotational states of molecules. IN: Sb 1, 16. (RZhRadiot, 11/75, 11Ye80)
220. Volkov, A. Yu., A. I. Demin, and Ye. M. Kudryavtsev (0). Study of the possibility of developing a recombination gasdynamic  $O_2$  laser. IN: Sb 1, 134. (RZhRadiot, 11/75, 11Ye25)

k. Miscellaneous Molecular

221. Burshteyn, A. I., and A. Yu. Fusep (0). Extra pulsation of radiation during switching of molecular lasers. IN: Sb 1, 138. (RZhRadiot, 11/75, 11Ye47)
222. Igoshin, V. I., and V. S. Masterov (0). Analytical and numerical solution of balance equations for multilevel chemical and molecular lasers in a quasistationary approximation. Part 1. Analytical approach. KE, no. 8, 1975, 1638-1647. (LC)
223. Ivanov, Yu. A., L. S. Polak, and D. I. Slovetskiy (0). Mechanisms of excitation, ionization and dissociation of molecules in a glow discharge. IN: Sb 1, 128-131. (RZhRadiot, 11/75, 11Ye23)
224. Kaslin, V. M., and G. G. Petrash (1). Pulsed gas lasers based on electron transitions of diatomic molecules. IN: Tr 2, 88-185. (RZhF, 10/75, 10D1081)
225. Knyazev, I. N. (0). Pulsed high pressure molecular lasers with variable frequency, and their application in spectroscopy. IN: Sb 1, 123-124. (RZhRadiot, 10/75, 10Ye9)
226. Krasil'nikov, S. S. (0). Laser based on a resonant transition of an ion. IN: Sb 1, 55. (RZhRadiot, 11/75, 11Ye78)
227. Kuntsevich, B. F., and V. V. Churakov (0). Molecular gas laser with resonant optical pumping. IN: Sb 1, 115. (RZhRadiot, 11/75, 11Ye99)
228. Lisitsyn, V. N. (0). Lasing at atomic and molecular transitions in gases at above-atmospheric pressure. IN: Sb 1, 36. (RZhRadiot, 10/75, 10Ye75)

229. Velikhov, Ye. P., S. A. Golubev, A. S. Kovalev, I. G. Persiantsev, V. D. Pis'mennyy, and A. T. Rakhimov (0). Stationary non-selfsustaining discharge in high-pressure molecular mixtures, which can be used as an active laser medium. IN: Sb 1, 27. (RZhRadiot, 10/75, 10Ye32)
230. Vitlina, R. Z., and A. V. Chaplik (0). Occurrence of population inversion in rotational levels of molecules under the action of an ultrashort optical pulse. IN: Sb 1, 33. (RZhRadiot, 10/75, 10Ye33)
231. Yeletskiy, A. V., and A. N. Starostin (0). Compression of the discharge in molecular gases. IN: Sb 1, 34. (RZhRadiot, 11/75, 11Ye32)

### 3. Ring Lasers

232. Danileyko, M. V., N. G. Zubrilin, A. P. Nedavniy, and M. T. Shpak (5). He-Ne ring laser with phase interaction of the traveling waves. UFZh, no. 9, 1975, 1573-1575.
233. Danileyko, M. V., A. P. Nedavniy, A. N. Nikolayenko, V. P. Fedin, and M. T. Shpak (0). Use of self-oscillating generation regimes for improving the frequency reproducibility of stabilized ring lasers. DAN SSSR, v. 224, no. 1, 1975, 68-71.
234. Ishchenko, Ye. F., V. N. Kuryatov, and O. S. Yukarov (19). Comparative polarization characteristics of disturbed ring resonators. IN: Tr 3, 90-95. (RZhF, 11/75, 11Zh483)
235. Kruglik, G. S., E. G. Pestov, and V. R. Pokrovskiy (0). Effect of quasiperiodic disturbances on the beat frequency in ring resonators. ZhPS, v. 23, no. 3, 1975, 405-410.

236. Privalov, V. Ye., and G. A. Strokovskiy (12). Improving the perimeter stability of the resonator of a gas ring laser. IVUZ Priboro, no. 8, 1975, 111-115.
237. Privalov, V. Ye., and Yu. V. Filatov (0). Determining the coefficients of output characteristics in a gas ring laser. IT, no. 11, 1975, 55-57.
238. Privalov, V. Ye., and Yu. V. Filatov (0). Effect of gain saturation on frequency pulling in linear and ring He-Ne lasers. KE, no. 7, 1975, 1489-1496. (LC)
239. Sudakov, V. F. (0). A method in the nonstationary theory of a ring generator. ZhPS, v. 23, no. 4, 1975, 617-623.
240. Sudakov, V. F. (0). Theory of a ring laser with variable frequency difference in the resonator. ZhPS, v. 23, no. 5, 1975, 811-819.
241. Sudakov, V. F. (0). Behavior of a ring laser in the lock-in range during modulation of the frequency difference of the resonator. OiS, v. 39, no. 5, 1975, 990-993.

#### 4. Theory

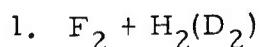
242. Baklanov, Ye. V., and Ye. A. Titov (10). Nonlinear resonance of power in a gas owing to magnetic hyperfine line splitting. KE, no. 9, 1975, 1893-1902.
243. Baklanov, Ye. V., B. Ya. Dubetskiy, V. M. Semibalamut, and Ye. A. Titov (10). Drift width of nonlinear power resonance in low pressure gases. KE, no. 11, 1975, 2518-2520. (LC)
244. Balakin, V. A., I. P. Konovalov, and Ye. D. Protsenko (16). Study of gain saturation of an active gas medium by a resonant monocromatic field. KE, no. 9, 1975, 1985-1991.

245. Biryukov, A. S., A. S. Volkov, and L. A. Shelepin (0). Lasing at electron transitions of an impurity gas resulting from a three-particle association of diatomic molecules. IN: Sb 1, 52. (RZhRadiot, 10/75, 10Ye52)
246. Bychkov, Yu. I., Yu. D. Korolev, Yu. A. Kurbatov, G. A. Mesyats, and A. G. Filonov (78). Efficiency of using a fast electron beam in electroionization lasers at atmospheric pressure. ZhTF, no. 9, 1975, 1982-1984.
247. Danilychev, V. A. (0). Dense gas lasers. IN: Sb 1, 32. (RZhRadiot, 10/75, 10Ye59)
248. Dreyzin, Yu. A., A. M. Dykhne, A. P. Napartovich, and Yu. M. Panchenko (0). Pulsed operating regime of stationary fast-flow lasers. IN: Sb 1, 26. (RZhRadiot, 11/75, 11Ye77)
249. Ebert, W. (NS). Device for gas purification and pressure compensation in gas lasers. Patent GDR, no. 93828, issued 12 November 1972. (RZhRadiot, 10/75, 10Ye55)
250. Gibadullin, N. S., and V. K. Nurmukhametov (0). Theory of a gas laser amplifier in a regeneration regime, allowing for the saturation effect. RiE, no. 10, 1975, 2202-2204.
251. Gudzenko, L. I., and S. I. Yakovlenko (0). Plasma lasers. IN: Sb 1, 51-52. (RZhRadiot, 11/75, 11Ye89)
252. Isayev, A. A., and G. G. Petrash (1). Study of pulsed gas lasers using atomic transitions. IN: Tr 2, 3-87. (RZhF, 11/75, 11D1120)
253. Konyukhov, V. K. (0). High power c-w gas lasers. IN: Sb 1, 11. (RZhRadiot, 11/75, 11Ye85)

254. Kruzhakov, V. A., T. M. Perchanok, D. K. Terekhin, S. A. Fridrikhov, and L. D. Tsendl (0). Study of the excitation of a high pressure discharge by SHF pulses. IN: Sb 1, 155. (RZhRadiot, 10/75, 10Ye51)
255. Latush, Ye. L., V. S. Mikhalevskiy, and M. F. Sem (0). Inversion mechanisms in ion lasers using chemical element vapors. IN: Sb 1, 147. (RZhRadiot, 11/75, 11Ye84)
256. Magda, I. I., N. I. Gaponenko, S. I. Naysteter, S. S. Pushkarev, G. V. Skachek, Yu. V. Tkach, and Ya. B. Faynberg (0). Pumping of gas lasers by high-current relativistic beams. IN: Sb 1, 33. (RZhRadiot, 10/75, 10Ye60)
257. Mardanov, R. F. (216). Effect of optical inhomogeneity of an active medium on the lasing frequency of a gas laser. KE, no. 9, 1975, 1879-1884.
258. Mesyats, G. A. (0). Use of e-beams for excitation of discharges in high pressure gases. IN: Sb 1, 31. (RZhRadiot, 10/75, 10Ye8)
259. Pechenkin, L. P., V. K. Fokin, and V. P. Gerasimov (0). Small-scale stabilizer as a power supply for a gas laser. PTE, no. 5, 1975, 158-159.
260. Petru, F. (NS). Discharge tube of a gas laser and its method of manufacture. Author's certificate Czechoslovakia, no. 151676, issued 15 December 1973. (RZhRadiot, 10/75, 10Ye56)
261. Sviridov, A. N., and Yu. D. Tropikhin (0). Gas discharge for a pulsed gas laser. Author's certificate USSR, no. 443435, issued 28 November 1974. (RZhRadiot, 9/75, 9Ye23)

262. Tuchin, V. V., and V. A. Sedel'nikov (99). Method for determining the dispersion line width of the active transition in a gas laser.  
 Author's certificate USSR, no. 409330, issued 19 September 1974.  
 (RZhRadiot, 9/75, 9Ye18)
263. Vinogradov, A. V., I. Yu. Skobelev, I. I. Sobel'man, and Ye. A. Yukov (1). Inversion medium for the vacuum ultraviolet region of the spectrum. KE, no. 10, 1975, 2189-2196. (LC)
264. Vitrishchak, I. B., and L. N. Soms (0). Effect of the lifetime of the  $^4I_{11/2}$  level of Nd<sup>3+</sup> ions on the energy characteristics of a single pulse laser. KE, no. 10, 1975, 2325-2327. (LC)
265. Voytovich, A. P., and A. P. Shkadarevich (0). Study of depolarizing collisions in the destruction by magnetic field of the alignment of atomic states in a gas laser. IN: Sb 1, 75. (RZhRadiot, 11/75, 11Ye73)
266. Voytovich, A. P., M. V. Dubovik, and A. P. Shkadarevich (3). Narrow resonances in polarization characteristics of gas lasers in a magnetic field, and their use in high resolution spectroscopy. KE, no. 9, 1975, 1903-1909.

#### D. CHEMICAL LASERS



267. Belotserkovets, A. V., G. A. Kiriilov, S. B. Kormer, G. G. Kochemasov, Yu. V. Kuratov, V. I. Mashendzhinov, Yu. V. Savin, E. A. Stankeyev, and V. D. Urlin (0). Chemical laser using mixtures of  $N_2F_4 + H_2$  and  $N_2F_4 + D_2$ , pumped by a CO<sub>2</sub> laser. KE, no. 11, 1975, 2412-2415. (LC)

## 2. Photodissociative

268. Belousova, I. M., B. D. Bobrov, A. S. Grenishin, and V. M. Kiselev (0). Controlling the pulse duration of a photodissociative laser by means of magnetic fields. IN: Sb 1, 49. (RZhRadiot, 10/75, 10Ye63)
269. Isakov, V. K., V. M. Kiselev, and V. N. Kurzenkov (0). Some polarization-frequency effects in the stimulated emission of an iodine atom in a magnetic field. CiS, v. 39, no. 4, 1975, 739-744.
270. Kozlov, N. P., A. S. Kamrukov, G. N. Kashnikov, V. A. Malashchenko, V. K. Orlov, and Yu. S. Protasov (0).  $C_3F_7I$  photodissociation laser excited by radiation from a magnetoplasma compressor. ZhTF P, no. 9, 1975, 419-422. (RZhF, 11/75, 11D1154)
271. Skorobogatov, G. A., V. G. Seleznev, B. N. Maksimov, and O. N. Slesar' (12). Study of stimulated emission in various perfluoroalkyliodides. ZhTF, no. 11, 1975, 2454-2458.
272. Skorobogatov, G. A. (0). Two regimes for propagation of photodissociation waves. ZhTF P, no. 10, 1975, 452-456. (RZhF, 10/75, 10D925)
273. Yershov, L. S., V. Yu. Zalesskiy, A. M. Kokushkin, S. S. Polikarpov, and V. N. Sokolov (0). Chemical conversions in the active medium of a photodissociative iodine laser. IN: Sb 1, 48. (RZhRadiot, 10/75, 10Ye62)
274. Yershov, L. S., V. Yu. Zalesskiy, and A. M. Kokushkin (0). Action of high power laser radiation at 530 nm in iodine vapor. KE, no. 8, 1975, 1671-1680. (LC)

275. Zalesskiy, V. Yu. (0). Pyrolyzing bleaching wave.  
ZhETF, v. 69, no. 2, 1975, 513-522.
276. Zalesskiy, V. Yu., and S. S. Polikarpov (0). Study of the conditions determining the lasing threshold of a CF<sub>3</sub>I iodine laser.  
KE, no. 7, 1975, 1536-1547. (LC)
277. Zuyev, V. S., and V. A. Katulin (0). Short pulse iodine laser with optical pumping for plasma studies. IN: Sb 1, 45.  
(RZhRadiot, 11/75, 11Ye92)

### 3. Miscellaneous

278. Bashkin, A. S., A. N. Orayevskiy, and N. N. Yuryshev (0). Studies of chemical CO and CO<sub>2</sub> lasers. IN: Sb 1, 44.  
(RZhRadiot, 11/75, 11Ye16)
279. Basov, N. G., A. S. Bashkin, V. I. Igoshin, and A. N. Orayevskiy (0). Chemical lasers. IN: Sb 1, 41. (RZhRadiot, 10/75, 10Ye74)

## E. COMPONENTS

### 1. Resonators

#### a. Design and Performance

280. Ablekov, V. K., and V. S. Belyayev (0). Systematic approach to the problem of an optical resonator. ZhPS, v. 23, no. 6, 1975, 1110-1112.
281. Anan'yev, Yu. A., N. I. Grishanova, I. M. Petrova, and N. A. Sventsitskaya (0). Reflecting surfaces inside unstable resonators.  
KE, no. 9, 1975, 1952-1956.

282. Buchenkov, V. A., A. A. Mak, B. G. Malinin, L. N. Soms, and A. I. Stepanov (0). Study of a laser with an active disk element in a periodic operating regime. KE, no. 9, 1975, 2037-2040.
283. Golyayev, Yu. D., and V. R. Kushnir (0). Effect of the offset of the active element on the energy characteristics of a laser. ZhTF, no. 9, 1975, 1984-1986.
284. Isayev, S. K., and L. S. Korniyenko (0). Calculating the parameters of a resonator with optical delay line. OiS, v. 39, no. 6, 1975, 1153-1156.
285. Ishchenko, Ye. F., and Ye. F. Reshetin (19). Axial contour method in studying the characteristics of offset optical resonators. IN: Tr 3, 99-102. (RZhF, 9/75, 9D874)
286. Voytovich, A. P., A. A. Pavlyushchik, and A. P. Shkadarevich (0). Effect of resonator anisotropy on the energy characteristics of a gas laser in a longitudinal magnetic field. ZhPS, v. 23, no. 6, 1975, 981-987.

b. Mode Kinetics

287. Bogdankevich, O. V., N. A. Borisov, B. A. Bryunetkin, S. A. Darznek, and B. M. Lavrushin (0). Longitudinal mode selection in a resonator with a periodic distributed dielectric constant. KE, no. 7, 1975, 1459-1464. (LC)
288. Gus'kov, L. N., V. P. Sologub, and B. I. Troshin (10). Effect of oscillations in the discharge on the spectral structure of intermode beats of a laser at a frequency of  $c/(2L)$ . KE, no. 10, 1975, 2346-2347. (LC)

289. Malyshev, V. I., A. V. Masalov, and A. I. Milanich (1).  
Energy distribution in a neodymium laser by modes.  
KE, no. 9, 1975, 1963-1968.
290. Troitskiy, Yu. V. (75). Use of a multibeam phase interferometer for obtaining single-frequency emission in lasers. KE, no. 11, 1975, 2444-2452. (LC)

## 2. Pump Sources

291. Arkhipov, S. V., and V. V. Panin (16). Analysis of the Bell-Blum equation for the case of pulsed intensity modulation of a transverse pumping beam. IVUZ Radiofiz, no. 11, 1975, 1642-1644.
292. Barkan, M. Ya., and V. N. Karalis (0). Trigger circuit and current stabilization of the DKsSh-150 lamp. ZhPS, v. 23, no. 4, 1975, 745-746.
293. Basov, Yu. G., and M. Yu. Vorob'yev (0). Study of plane-configuration flashlamps with a discharge duration of 7-25 microseconds. ZhPS, v. 23, no. 3, 1975, 398-404.
294. Basov, Yu. G., B. V. Kalachev, V. A. Tatarskiy, and A. N. Tokareva (0). Study of flashlamps with a short discharge in mixtures of xenon with molecular gases. ZhPS, v. 23, no. 6, 1975, 1095-1097.
295. Basov, Yu. G., S. G. Morozova, and A. N. Tokareva (0). Radiation spectra of flashlamps with ruby and neodymium glass shells. PTE, no. 5, 1975, 183-186.
296. Basov, Yu. G., V. N. Makarov, and G. I. Narkhova (0). Effect of ballast volumes in flashlamps on their radiation. RiE, no. 11, 1975, 2323-2327.

297. Basov, Yu. G., S. A. Boldyrev, L. I. Gavrilova, A. S. Doynikov, and G. Ye. Tsvilyuk (0). Shortwave radiation of flashlamps with microsecond discharge. KE, no. 8, 1975, 1840. (LC)
298. Gaponov, S. V., F. V. Garin, and L. V. Paramonov (0). Pump for a periodic-action solid-state laser. KE, no. 7, 1975, 1554. (LC)
299. Kamrukov, A. S., G. N. Kashnikov, N. P. Kozlov, V. A. Malashchenko, and Yu. S. Protasov (0). Energy and spectral characteristics of an IFP-2000 xenon lamp in a short pulse regime. ZhPS, v. 23, no. 3, 1975, 393-397.
300. Levin, M. B., and V. I. Shirokov (0). Efficiency of delivery to the active medium of radiation from a luminescent converter of a pump spectrum. OiS, v. 39, no. 5, 1975, 947-950.
301. Wolinski, W., A. Kazmirowski, D. Kwasniewski, and A. Kowalski (NS). Laser flashlamp. Patent Poland, no. 164926, issued 30 August 1973. (cited in Elektronika, no. 10, 1975, 416)
302. Zvorykin, V. D., G. N. Kashnikov, A. D. Klementov, N. P. Kozlov, V. A. Malashchenko, Yu. S. Protasov, and V. B. Rozanov (1, 2 !). Radiation from the plasma focus of a magnetoplasma compressor in the visible and ultraviolet spectral regions KE, no. 11, 1975, 2416-2422. (LC)

### 3. Deflectors

303. Pevnev, A. I., V. M. Chekh, and V. A. Pirlik (0). Method for scanning an optical beam. Author's certificate USSR, no. 458058, issued 11 March 1975. (FZhRadiot, 9/75, 9Ye167)
304. Sobol', V. P., and B. A. Gorshteyn (7). Beam splitter for polarized light. OMP, no. 9, 1975, 60-61.

#### 4. Filters

305. Bebchuk, A. S., M. N. Vetchinkin, G. Yu. Lemmerman, G. A. Matyushin, and S. B. Tolstaya (0). Effect of the spectral characteristics of liquid light filters on the efficiency of laser operation in a regime of recurrent flashes. ZhPS, v. 23, no. 5, 1975, 791-794.
306. Gal'pern, M. G., V. A. Gorbachev, V. A. Katulin, O. L. Lebedev, Ye. A. Luk'yanets, N. G. Mekhryakova, V. M. Mizin, V. Yu. Nosach, A. L. Petrov, and G. G. Semenovskaya (1). Bleachable filter for an iodine laser at  $1.315 \mu$ . KE, no. 11, 1975, 2531-2532. (LC)

#### 5. Mirrors

307. Apollonov, V. V., A. I. Barchukov, N. V. Karlov, A. M. Prokhorov, V. Yu. Khomich, and E. M. Shefter (0). Stability parameters for mirror surfaces of laser reflectors. ZhTF P, no. 11, 1975, 522-525. (RZhF, 11/75, 11D1195)

#### 6. Detectors

308. Akopyan, A. A., Z. S. Gribnikov, R. V. Konakova, Yu. A. Tkhonik, and Yu. M. Shvarts (6). Inverse currents in  $p^+Ge-n-GaAs$  heterojunctions. FTP, no. 9, 1975, 1799-1802.
309. Alfyorov, Zh. I., N. S. Zimogorova, S. G. Konnikov, I. Matkova, L. Pramatarova, and D. N. Tret'yakov (4). Selective heterophotoelements at  $1.06 \mu$  in a GaSb-AlSb system. ZhTF P, no. 14, 1975, 641-644.
310. Andreyeva, L. I., A. A. Benditskiy, Yu. P. Vinograd, S. A. Kaydalov, G. I. Rukman, and B. M. Stepanov (0). Possibility of developing pulsed radiation detectors based on the thermoemission effect. Metrologiya, no. 11, 1975, 54-57.

311. Brunov, V. V., A. F. Kotyuk, L. N. Samoylov, S. V. Tikhomirov, and V. A. Yakovlev (0). Determining the time characteristics of high speed photocells. IT, no. 11, 1975, 54-55.
312. Dolgopolov, S. G., and V. M. Klement'yev (10). Sensitivity of a germanium photodetector to  $10.6 \mu$  radiation. KE, no. 10, 1975, 2333-2335. (LC)
313. Dugin, V. S., I. N. Matveyev, S. M. Pshenichnikov, N. P. Sopina, and A. F. Umnov (0). Study of amplitude distributions of noise and of signal-plus-noise in a receiver with parametric frequency conversion. KE, no. 9, 1975, 2101-2103.
314. Gurov, A. N., G. I. Ivanov, V. N. Lysenko, and V. V. Serdyuk (0). Methods for designing converters based on CdS-Cu<sub>2</sub>S heterojunctions. IN: Sb 4, 114-116. (RZhF, 10/75, 10D1445)
315. Il'in, V. Ye., K. A. Kiseleva, Ya. A. Oksman, and Ye. P. Semenov (0). Absorption IR image converter. PTE, no. 4, 1975, 178-181.
316. Khinrikus, Kh. V. (255). Noise in photodetection of nonideal laser radiation. IVUZ Radiofiz, no. 10, 1975, 1438-1441.
317. Khinrikus, Kh. V., and T. E. Soonurm (0). Antenna properties of a metal-oxide-metal detector. RiE, no. 10, 1975, 2219-2220.
318. Khinrikus, Kh. V., and T. E. Soonurm (0). Evaluating the sensitivity of a metal-oxide-metal detector. RiE, no. 10, 1975, 2220-2222.
319. Kovtonyuk, N. F. (0). Photosensitivity of an ideal cumulative detector using symmetrical semiconductor-dielectric structures. FTP, no. 12, 1975, 2386-2388.

320. Marmur, I. Ya., Ya. A. Oksman, and A. A. Semenov (0). Registering of 10.6  $\mu$  laser radiation by means of semiconductor diodes. ZhTF P, no. 12, 1975, 545-547.
321. Marmur, I. Ya., Ya. A. Oksman, and A. A. Semenov (0). Response of LED's to 10.6  $\mu$  laser radiation. ZhTF P, no. 12, 1975, 548-551.
322. Marmur, I. Ya., and Ya. A. Oksman (0). Effect of 10.6  $\mu$  laser radiation on the current of a forward biased photodiode. FTP, no. 11, 1975, 2121-2124.
323. Plotrowski, J., T. Persak, and W. Galus (NS). Application of  $A^{II}B^{VI}$  compounds for laser radiation detectors. PF, no. 6, 1975, 569-578.
324. Radautsan, S. I., E. K. Arushanov, Ya. I. Benda, and G. P. Chuyko (44). Cadmium arsenide as a material for heat flux detection. DAN SSSR, v. 224, no. 3, 1975, 566-568.
325. Strekalov, V. N. (118). The Gunn effect in a laser radiation field. FTP, no. 12, 1975, 2365-2366.
326. Vasilevskiy, D. L., V. V. Serdyuk, and G. G. Chemeresyuk (240). Effect of optical excitation on the volt-ampere characteristics of a CdS-Cu<sub>2</sub>S heterojunction. FTP, no. 11, 1975, 2065-2068.
327. Vasil'yev, A. M., Zh. Ye. Gryaznova, A. L. Kostanenko, N. Ye. Selivanenko, and V. F. Sharikhin (19). Silicon thermoelectric radiation detector. IN: Tr 3, 102-105. (RZhF, 9/75, 9D1180)
328. Veletskas, D., R. Baltrameynas, Yu. Vaytkus, I. V. Potykevich, and V. S. Koval' (49). Photoconductivity of CdP<sub>2</sub> polycrystals under excitation by ruby and neodymium lasers. FTP, no. 9, 1975, 1752-1756.

## 7. Modulators

329. Alayev, V. Ya., Ye. D. Isyanova, V. M. Ovchinnikov, and A. M. Marugin (0). Method for Q-switching in a laser. Author's certificate USSR, no. 321183, issued 17 January 1975.  
(RZhRadiot, 9/75, 9Ye178)
330. Aleksandrovskiy, A. L., Yu. A. Maskayev, and I. I. Naumova (2). Electrooptic effect of light diffraction on the growth domain structure of barium-sodium niobate crystals. FTT, no. 11, 1975, 3197-3200.
331. Baklanov, Ye. V., and Ye. A. Titov (0). Interaction of a frequency-modulated standing wave field with a gas, allowing for magnetic hyperfine line splitting. KE, no. 8, 1975, 1781-1788. (LC)
332. Bykovskiy, Yu. A., A. V. Makovkin, V. L. Smirnov, and V. N. Sorokovikov (16). Modulation of laser radiation in liquid thin film waveguides. KE, no. 11, 1975, 2499-2508. (LC)
333. Dumitrica, A., and N. Popescu (NS). Wideband modulators for optical communication systems. Studii si Cercetari de Fizica, v. 27, no. 4, 1975, 399-417. (RZhF, 11/75, 11D1451)
334. Glinskiy, G. F., and A. N. Pikhtin (110). Modulation of light in the space-charge layer of a GaP p-n junction. ZhTF P, no. 15, 1975, 701-704.
335. Grekhov, I. V., M. Ye. Levinstejn, and M. S. Shur (4). Optical modulator. Otkr izobr, no. 41, 1975, 398153.
336. Gryaznov, Yu. M. (0). Study of long-lived photoinduced excited forms of brominated phthalocyanine adducts. ZhPS, v. 23, no. 6, 1975, 1014-1020.

337. Koenig, R., D. Leupold, and K. Roesler (NS). Q-switch for a ruby laser. Patent GDR, no. 92765, issued 20 September 1972. (RZhRadiot, 10/75, 10Ye88)
338. Kuznetsova, L. I., L. A. Kulevskiy, Yu. N. Polivanov, and K. A. Prokhorov (1). Scattering of light by polaritons in a lithium formate crystal. KE, no. 9, 1975, 2095-2098.
339. Logginov, A. S., and V. Ye. Solov'yev (0). Modulation of radiation from injection heterolasers by means of a Gunn diode. KE, no. 7, 1975, 1558. (LC)
340. Maloch, J., Z. Stanek, B. Sestak, and K. Sobra (NS). Device for modulating the plasma of a gas laser. Patent Czechoslovakia, no. 146056, issued 15 November 1972. (RZhRadiot, 10/75, 10Ye133)
341. Marugin, A. M., and V. M. Ovchinnikov (0). Device for controlling an electrooptic switch in a laser. Author's certificate USSR, no. 341398, issued 13 February 1975. (RZhRadiot, 9/75, 9Ye168)
342. Mel'tsin, A. L., V. V. Shchegolev (0). Balanced optical discriminator using an external gas discharge cell. PS, v. 23, no. 3, 1975, 422-427.
343. Mohr, J. (NS). Device for passive Q-switching. Patent GDR, no. 90401, issued 5 June 1972. (RZhRadiot, 9/75, 9Ye175)
344. Popescu, N., and A. Dumitrica (NS). Electrooptic modulators using an ADP crystal. Studii si Cercetari de Fizica, v. 27, no. 3, 1975. (RZhF, 11/75, 11D1450)
345. Selivanov, P. P. (365). High voltage pulse generator for light modulators. PTE, no. 5, 1975, 96-97.

346. Solomko, A. A., V. S. Sidorenko, and G. A. Melkov (51). Microwave modulator of optical radiation. Otkr izobr, no. 44, 1975, 493749.
347. Solomko, A. A., and Yu. N. Parkhomenko (0). Spectral characteristics of optical radiation at the output of an electrooptic traveling wave modulator. OiS, v. 39, no. 3, 1975, 579-586.
348. Titov, Ye. A. (10). Transit effects on the position of the stabilized frequency of a gas laser. KE, no. 10, 1975, 2217-2222. (LC)
349. Vorob'yev, L. Ye., I. V. Krutetskiy, and A. B. Fedortsov (195). Modulation of longwave infrared radiation using a shorter wave driver. IN: Tr 4, 20-23. (RZhF, 10/75, 10D1200)

F. NONLINEAR OPTICS

1. Frequency Conversion

350. Akhmanov, S. A., V. A. Martynov, S. M. Saltiyel, and V. G. Tunkin (2). Observation of nonresonant six-photon processes in a calcite crystal. ZhETF P, v. 22, no. 3, 1975, 143-147.
351. Akhmediyev, N. N. (2). Role of the boundary layer in second harmonic generation during reflection from a metal surface. ZhTF, no. 10, 1975, 2109-2115.
352. Akhmediyev, N. N. (2). Effect of spatial dispersion on a reflected second harmonic. KE, no. 9, 1975, 2099-2101.
353. Arutyunyan, E. A., R. E. Kostanyan, V. S. Mkrtchyan, and M. A. Mkrtchyan (0). Spectral characteristics of an IR-to-visible converter using an  $\text{LiNbO}_3$  crystal. KE, no. 8, 1975, 1811. (LC)

354. Beregulin, Ye. V., P. M. Valov, T. V. Rybakova, V. M. Salmanov, and I. D. Yaroshetskiy (4). Experimental study of the conversion of infrared light to the near infrared in gallium selenide crystals. FTP, no. 12, 1975, 2288-2291.
355. Beterov, I. M., V. I. Stroganov, Trunov, and B. Ya. Yurshin (10). Excitation of optical harmonics in lithium iodate and lithium formate crystals by c-w dye laser radiation. KE, no. 11, 1975, 2440-2443. (LC)
356. Buzinov, N. M., V. G. Dmitriyev, A. G. Yershov, O. Yu. Tsvetkova, and O. B. Cherednichenko (0). Optical frequency converter using an organic dye solution. PTE, no. 4, 1975, 171-172.
357. Davydov, B. L., V. F. Zolin, L. G. Koreneva, and Ye. A. Lavrovskiy (0). Spectroscopic studies of frequency summing in the process of conversion of IR radiation in metanitroanaline crystals. OiS, v. 39, no. 4, 1975, 713-718.
358. Dmitriyev, V. G., and I. Ya. Itskhoki (0). Theory of intraresonator second harmonic generation. KE, no. 7, 1975, 1367-1373. (LC)
359. D'yakov, Yu. Ye., B. V. Zhdanov, A. I. Kovrigin, and S. M. Pershin (0). Limitation of the efficiency of second harmonic frequency conversion due to diffraction and stimulated Brillouin scattering. KE, no. 8, 1975, 1828. (LC)
360. Grib, B. N., I. I. Kondilenko, and P. A. Korotkov (0). Electrooptic deflection by a KDP crystal and its use for frequency tuning in a neodymium laser. ZhPS, v. 23, no. 5, 1975, 804-810.
361. Il'inskiy, Yu. A., and V. D. Taranukhin (0). Theory of frequency upconversion in gases under two-photon resonance conditions. KE, no. 7, 1975, 1497-1507. (LC)

362. Kolomiyskiy, Yu. R., V. S. Letokhov, and O. A. Tumanov (0). Resonant conversion of CO<sub>2</sub>-N<sub>2</sub>-He laser radiation by an overtone of the COS molecule. IN: Sb 1, 112. (RZhRadiot, 10/75, 10Ye23)
363. Krochik, G. M., and Yu. G. Khronopulo (0). Frequency conversion in resonant four-wave parametric processes based on stimulated Raman scattering. KE, no. 8, 1975, 1693-1700. (LC)
364. Kryukov, P. G., Yu. A. Matveyets, and D. N. Nikogosyan (72). Method of recording IR radiation with picosecond time resolution based on perpendicular up-conversion. KE, no. 10, 1975, 2269-2275. (LC)
365. Milinkevich, A. V., V. A. Savva, and A. M. Samson (0). Modulation of laser radiation with multi-mirror resonators. ZhPS, v. 23, no. 6, 1975, 975-980.
366. Nikogosyan, D. N. (72). Efficiency of up-conversion of CO<sub>2</sub> laser radiation in proustite pumped by ultrashort pulses. KE, no. 11, 1975, 2524-2525. (LC)
367. Novikov, M. A. (0). Polarized frequency selectors for lasers with thermal deformation in the active elements. OiS, v. 39, no. 3, 1975, 609-611.
368. Petru, F. (NS). Piezoelectric element for frequency conversion. Patent Czechoslovakia, no. 145732, issued 15 October 1972. (RZhRadiot, 10/75, 10Ye181)
369. Shigorin, V. D., G. P. Shipulo, S. S. Grazhulene, L. A. Musikhin, and V. Sh. Shekhtman (1, 66). Nonlinear optical properties of metatoluylenediamine molecular crystals. KE, no. 11, 1975, 2544-2547.

370. Stejskal, A. (NS). Control circuit for a servo unit in a single-frequency stabilized laser. Patent Czechoslovakia, no. 145174, issued 15 September 1972. (RZhRadiot, 10/75, 10Ye180)

## 2. Parametric Processes

371. Adonts, G. G., L. M. Kocharyan, and N. V. Shakhnazaryan (0). Parametric processes in a system of three-level atoms. KE, no. 7, 1975, 1395-1399. (LC)

372. D'yakov, Yu. Ye., and A. I. Kovrigin (2). Theory of a parametric generator of light with a narrow line under multimode pumping. KE, no. 10, 1975, 2243-2247. (LC)

373. Il'inskiy, Yu. A., and V. D. Taranukhin (0). Effect of pumping polarization on the threshold of four-photon parametric generation of light in gases. KE, no. 7, 1975, 1575. (LC)

374. Il'inskiy, Yu. A., D. N. Klyshko, and V. M. Petnikova (2). Photon statistics in the parametric interaction of three waves. KE, no. 11, 1975, 2467-2474. (LC)

375. Zhdanov, B. V., V. V. Kalitin, A. I. Kovrigin, and S. M. Pershin (2). Parametric generator of light with tuning from 3980 to 7920 Å. ZhTF P, no. 18, 1975, 847-851.

## 3. Stimulated Scattering

### a. Raman

376. Averbakh, V. S., A. I. Makarov, and V. I. Talanov (0). Experimental observation of the effects of rotational and vibrational stimulated Raman scattering in compressed nitrogen. IN: Sb 5, 113.

377. Baklanov, Ye. V., I. M. Beterov, B. Ya. Dubetskiy, and V. P. Chebotayev (10). Nonlinear effects in the resonant stimulated Raman scattering line in a gas in a standing wave field. ZhETF P, v. 22, no. 5, 1975, 289-293.
378. Betin, A. A., G. A. Pasmanik, and L. V. Piskunova (8). Stimulated Raman scattering of optical beams in a saturation regime. KE, no. 11, 1975, 2403-2411. (LC)
379. Butylkin, V. S., D. Yu. Kozyarskiy, E. N. Plyusnina, P. S. Fisher, and Yu. G. Khronopulo (15). Study of the generation of resonant radiation during stimulated Raman scattering in gases. KE, no. 10, 1975, 2282-2291. (LC)
380. Drampyan, R. Kh., and M. Ye. Movsesyan (59). Effect of an external permanent magnetic field on stimulated electron Raman scattering in potassium vapor. DAN Arm, v. 61, no. 1, 1975, 33-35.
381. Fedorov, M. V. (0). Scattering of electrons by an intense standing wave under adiabatic inclusion conditions in the interaction. KE, no. 7, 1975, 1519-1526. (LC)
382. Il'inskiy, Yu. A., and V. D. Taranukhin (0). Polarization characteristics of resonant Raman and hyper-Raman scattering of light in gases. KE, no. 8, 1975, 1742-1748. (LC)
383. Kravtsov, N. V., and N. I. Naumkin (0). Characteristics of stimulated Raman emission in the case of a "long" stimulated Raman scattering active medium. FTT, no. 11, 1975, 3383-3385.
384. Kravtsov, N. V., and N. I. Naumkin (0). Dynamics of stimulated Raman scattering from self-action of an optical beam. IN: Sb 1, 120. (RZhRadiot, 11Yel55)

385. Kravtsov, N. V., N. I. Naumkin, and V. P. Protasov (0). Dynamics of stimulated Raman scattering in a gas under excitation by a train of short pulses. KE, no. 7, 1975, 1585. (LC)
386. Makhviladze, T. M., M. Ye. Sarychev, and L. A. Shelepin (1). Raman scattering in an excited medium. ZhETF, v. 69, no. 2, 1975, 499-512.
387. Morozova, Ye. A., and A. I. Sokolovskaya (1). Self-focusing of higher Stokes and anti-Stokes components of stimulated Raman scattering in liquid carbon disulfide. ZhETF, v. 69, no. 2, 1975, 488-492.
388. Nechayev, S. Yu., and Yu. N. Ponomarev (0). High-resolution stimulated Raman scattering spectrometer. KE, no. 7, 1975, 1400-1402. (LC)
389. Orlovich, V. A. (0). Some features of stimulated Raman scattering in a resonator under transverse pumping. ZhPS, v. 23, no. 3, 1975, 411-415.
390. Reshetnyak, S. A., and L. A. Shelepin (1). Quasi-equilibrium distribution of component intensities in stimulated Raman scattering. KE, no. 10, 1975, 2248-2254. (LC)
391. Venkin, G. V., L. L. Kulyuk, and D. I. Maleyev (2). Study of stimulated Raman scattering in gases under excitation by fourth harmonic radiation of a neodymium laser. KE, no. 11, 1975, 2485-2480. (LC)
392. Vlasov, D. V. (0). Polarization-angular method for selecting depolarized types of stimulated scattering. KE, no. 7, 1975, 1439-1444. (LC)

b. Rayleigh

393. Tukhvatullin, F. Kh., A. K. Atakhodzhayev, and F. Ganiyev (0). Width and shape of the Rayleigh anisotropic scattering contour in various organic liquids. IN: Sb 6, 109-112. (RZhKh, 19AB, 19/75, 19B729)

c. Theory

394. Averbakh, V. S., A. I. Makarov, and V. I. Talanov (8). Stimulated molecular scattering of light in gases at various pressures. KE, no. 10, 1975, 2207-2216. (LC)

4. Acoustic Interaction

395. Adrianova, I. I., L. G. Ayo, L. N. Asnis, Ye. A. Kislytskaya, and A. V. Moskalenko (0). Acoustooptic properties of glass of the As-Se system. Akusticheskiy zhurnal, no. 5, 1975, 822-824.
396. Akhmanov, S. A., and O. V. Rudenko (0). Parametric laser ultrasound emitter. ZhTF P, no. 15, 1975, 725-728.
397. Bozhkov, A. I., F. V. Bunkin, and V. V. Savranskiy (0). Generation of sound in a liquid from irradiation of its surface by laser radiation with modulated intensity. ZhTF P, no. 9, 1975, 435-439. (RZhF, 10/75, 10Zh673)
398. Bozhkov, A. I., and F. V. Bunkin (0). Generation of sound in a liquid during its absorption of laser radiation with modulated intensity. KE, no. 8, 1975, 1763-1776. (LC)
399. Brodovich, N. A. (0). Intraresonator modulation of laser radiation by diffraction in ultrasound. OiS, v. 39, no. 5, 1975, 943-946.

400. Demidov, A. Ya., V. I. Yefanov, Ye. S. Kovalenko, A. V. Pugovkin, L. Ya. Serebrennikov, and S. M. Shandarov (0). Study of amplitude and frequency characteristics of acoustooptic spectral analyzers and deflectors. IN: Sb 4, 141-144. (RZhRadiot, 10/75, 10Ye135)
401. Korolev, F. A., and A. N. Murad (0). Amplification of ultrasound by high power laser radiation. OiS, v. 39, no. 5, 1975, 938-942.
402. Maneshin, N. K., V. N. Parygin, and A. D. Sokurenko (2). Two-dimensional scanning of light by ultrasound. VMU, no. 5, 1975, 574-578.
403. Pisarevskiy, Yu. V., and I. M. Sil'vestrova (13). Method for channel compression in a multichannel ultrasonic modulator of light. Otkr izobr, no. 35, 1975, 485402.
404. Vizen, F. L., V. N. Maslennikov, I. A. Poluektov, V. I. Pustovoyt, and G. I. Semenov (1). Deflection of an injection laser beam by an acoustooptic deflector. KE, no. 11, 1975, 2540-2541. (LC)
405. Voskoboynikov, A. M., and V. A. Pazderskiy (227). Absorption of light by sound. FTP, no. 9, 1975, 1816-1818.
406. Yesepkina, N. A., V. Yu. Petrun'kin, Ye. T. Aksenov, V. A. Grigor'yev, V. A. Markov, V. P. Pikarnikov, S. V. Pruss-Zhukovskiy, and V. V. Soroka (29). Multichannel acoustooptic device. ZhTF, no. 11, 1975, 2353-2360.
407. Zil'berman, G. Ye., and L. F. Kupchenko (0). Transmission of light through an ultrasonic beam in a homogeneous isotropic dielectric. RiE, no. 11, 1975, 2347-2356.

408. Zyuryukin, Yu. A., V. A. Polotnyagin, V. M. Pushin, N. M. Ushakov, and R. I. Burshteyn (0). Electroacoustic converters in the SHF range for acoustooptic modulators and deflectors of laser radiation. IVUZ Radioelektr, no. 8, 1975, 86-90.

### 5. Birefringence

409. Berezhnoy, A. A., V. Z. Gurevich, and Yu. V. Popov (0). Longitudinal electrooptical effect and photoinduced anisotropy in CdS crystals. FTT, no. 9, 1975, 2702-2704.
410. Berezhnoy, A. A., V. Z. Gurevich, Yu. V. Popov, and I. V. Semeshkin (0). Optical control of induced birefringence in ZnSe crystals. KE, no. 8, 1975, 1789-1794. (LC)
411. Merkulov, V. S., Ye. G. Rudashevskiy (1), and A. Le Gall (French). Direct measurement of the magnetic and deformation contributions to birefringence in a weak ferromagnetic phase of hematite ( $\alpha\text{-Fe}_2\text{O}_3$ ). ZhETF P, v. 22, no. 3, 1975, 140-142.
412. Vasilevskaya, A. S., I. M. Grodnenskiy, A. S. Sonin, and B. M. Stepanov (141). Effect of laser radiation on the birefringence of a transparent ferroceramic. KE, no. 9, 1975, 2063-2065.
413. Yevdokimova, V. G., A. A. Mak, L. N. Soms, and A. I. Shafarostov (0). Compensating for induced birefringence in laser systems by passive anisotropic elements. KE, no. 9, 1975, 1915-1922.

### 6. General Theory

414. Apanasevich, P. A., A. A. Afanas'yev, and A. I. Urbanovich (3). Mechanisms of diffraction of light by optically generated lattices in absorbing media. KE, no. 11, 1975, 2423-2428. (LC)

415. Belyy, V. N., B. V. Bokut', and A. N. Serdyukov (0).  
Theory of nonlinear optical activity. Part 2. First order effects.  
OIS, v. 39, no. 6, 1975, 1176-1178.
416. Butylkin, V. S., G. M. Krochik, and Yu. G. Khronopulo (174).  
Nonlinear spectroscopy based on the effect of a resonant optical  
detector. ZhETF P, v. 22, no. 11, 1975, 560-563.
417. Fedorov, M. V. (1). Stark effect in a hydrogen atom in the presence  
of an intense resonant wave. KE, no. 11, 1975, 2429-2432. (LC)
418. Korobkov, V. S., N. V. Sidorov, and N. Ya. Khassanov (0).  
Structure of a laser beam in a hydroquinone crystal.  
IN: Sb 7, 89-92. (RZhKh, 19AB, 18/75, 18B537)
419. Ogluzdin, V. Ye. (2). Angular structure of quasimonochromatic  
radiation scattered in a resonant medium. ZhTF P, no. 12,  
1975, 563-566.
420. Petrov, N. S., B. B. Boyko, and I. Z. Dzhilavdari (0).  
Reflection of light from a semi-infinite exponentially inhomogeneous  
amplifying medium. ZhPS, v. 23, no. 4, 1975, 705-709.
421. Ponomarev, Yu. V. (0). Third All-Union Seminar on Nonlinear  
Oscillations in Distributed Systems, Gor'kiy, 9-19 March 1975.  
KE, no. 9, 1975, 2108-2109.
422. Sokolov, V. A. (0). Nonlinear interaction of traveling waves with  
arbitrary states of polarization in a two-isotope active medium.  
KE, no. 7, 1975, 1433-1438.
423. Voloshchenko, A. M., Ye. N. Guminov, and Yu. G. Pavlenko (2).  
Drag effect on the magnetic moment in a strong radiation field.  
VMU, no. 5, 1975, 619-621.

424. Zakharov, V. Ye., and V. S. L'vov (73). Statistical description of nonlinear wave fields. IVUZ Radiofiz, no. 10, 1975, 1470-1487.
425. Zavelishko, V. I., V. A. Martynov, S. M. Saltyel, and V. G. Tunkin (2). Optical nonlinear sensitivities of the fourth and fifth orders. KE, no. 11, 1975, 2541-2544. (LC)

#### G. SPECTROSCOPY OF LASER MATERIALS

426. Borisevich, N. A., L. M. Bolot'ko, and T. G. Staneva (0). Triplet absorption in phthalimide solutions. ZhPS, v. 23, no. 4, 1975, 633-637.
427. Borisevich, N. A., L. M. Bolot'ko, I. I. Kalosha, and V. A. Tolkachev (3). Spectral-luminescent and generation characteristics of aromatic compound vapors. IAN Fiz, no. 9, 1975, 1812-1818.
428. Danilov, V. V., Yu. T. Mazurenko, and M. A. Ter-Pogosyan (0). Polarization of luminescence of complex molecules under high power excitation. IAN Fiz, no. 11, 1975, 2312-2315.
429. Derbov, V. L., M. A. Kovner, and S. K. Potapov (0). Theory of luminescence and Raman scattering in molecules irradiated by high power resonant light. IAN Fiz, no. 11, 1975, 2404-2407.
430. Gaysenok, V. A., A. P. Klishchenko, I. A. Dudarev, and I. N. Kolev (0). Effect of Brownian rotation on the anisotropy of fluorescence emission under laser excitation. IAN Fiz, no. 11, 1975, 2308-2311.
431. Gorban', N. Ya., and V. A. Odarich (0). Optical constants of YIG in an intense absorption region. ZhPS, v. 23, no. 6, 1975, 1106-1109.

432. Mosichev, V. I., O. V. Yanush, N. M. Slastenova, I. M. Batyayev, N. L. Bel'kova, and M. A. Solov'yev (362). Spectroluminescent properties of phosphoryl rhodanide activated by neodymium. NM, no. 8, 1975, 1396-1398.
433. Orlov, M. S., and A. L. Stolov (0). Optical spectra and structure of impurity centers in  $\text{CaF}_2\text{-YF}_3$  and  $\text{SrF}_2\text{-YF}_3$  crystals. OiS, v. 39, no. 6, 1975, 1114-1118.
434. Personov, R. I. (0). Effect of sharp narrowing of spectral bands of organic molecules under laser excitation. UFN, v. 116, no. 4, 1975, 747-750.
435. Petrosyan, A. G., Kh. S. Bagdasarov, T. I. Butayeva, A. M. Kevorkov, and A. A. Shakhnazaryan (59, 13). Dependence of the distribution coefficient of  $\text{Nd}^{3+}$  ions in YAG single crystals on the conditions of crystallization. Kristal, no. 5, 1975, 1089-1090.
436. Podgornaya, L. M., L. P. Snagoshchenko, L. D. Shcherbak, Yu. A. Nestrižhenko, and V. I. Grigor'yeva (0). Luminescent properties of heteroaryl derivatives of stilbene under conventional and laser excitation. IAN Fiz, no. 11, 1975, 2359-2362.
437. Pugachev, V. L., T. D. Slavnova, A. K. Chibisov, A. V. Karyakin, and V. Ye. Korobov (184). Triplet state of associated molecules of rhodamine 6G. IAN Fiz, no. 11, 1975, 2363-2367.
438. Rubinov, A. N. (0), M. C. Richardson, and J. D. Alcock (Canadians). Fast scan of luminescence spectra of rhodamine 6G and B solutions excited by ultrashort laser pulses. KE, no. 8, 1975, 1681-1687. (LC)
439. Veselova, T. V., A. S. Cherkasov, and V. I. Shirokov (0). Effect of various polar impurities on the spectral-fluorometric characteristics of structurally-varying phthalimides in nonpolar solvents. OiS, v. 39, no. 6, 1975, 1073-1078.

440. Vinogradov, Ye. Ye., I. A. Kirilenko, Yu. I. Rasilov, and A. F. Solokha (18). Structure of Nd<sup>3+</sup> terms in nitrate glasses. NM, no. 8, 1975, 1501-1515.

#### H. ULTRASHORT PULSE GENERATION

441. Bogdanova, M. V., and T. M. Il'inova (2). Theory of the propagation of ultrashort pulses in a three-level medium. KE, no. 10, 1975, 2261-2268. (LC)
442. Borisevich, N. A., G. B. Tolstorozhev, V. A. Tugbayev, and D. M. Khalimanovich (0). Superradiative laser using vapors of complex molecules in an ultrashort pulse regime. ZhPS, v. 23, no. 6, 1975, 1098-1099.
443. Bureyev, V. A., V. B. Gerasimov, and S. A. Gerasimova (0). Amplification of ultrashort pulses in a combination-active medium. KE, no. 10, 1975, 2331-2333. (LC)
444. Krivoshchekov, G. V., N. G. Nikulin, and V. A. Smirnov (10). Ultrashort pulse generation in a laser with a two-component medium and stimulated mode locking. KE, no. 9, 1975, 2019-2025.
445. Lariontsev, Ye. G., and V. N. Serkin (0). Possibility of using self-focusing for increasing the contrast and narrowing of ultrashort light pulses. KE, no. 7, 1975, 1481-1488. (LC)
446. Milinkevich, A. V., V. A. Savva, and A. M. Samson (3). Self-stabilization of ultrashort pulse characteristics in a laser with mode-locking. ZhTF P, no. 17, 1975, 810-813.
447. Veletskas, D., K. Yarashyunas, R. Baltrameynas, and Yu. Vaytkus (49). Use of dynamic holograms for measuring the duration of ultrashort light pulses. ZhTF F, no. 15, 1975, 708-711.

J. CRYSTAL GROWING

448. Ivanova, I. A., A. M. Morozov, M. A. Petrova, P. G. Podkolzina, and P. P. Feofilov (0). Growing single crystals of binary lithium fluorides and rare-earth metals, and their properties. NM, no. 12, 1975, 2175-2179.

K. THEORETICAL ASPECTS OF ADVANCED LASERS

449. Andreyev, A. V., and Yu. A. Il'inskiy (2). Possibility of using the effect of anomalous passage of gamma quanta for amplifying limited beams in a gamma laser. ZhETF P, v. 22, no. 9, 1975, 462-465.
450. Basov, N. G., A. G. Molchakov, and Yu. M. Popov (0). Generation of shortwave radiation. IN: Sb 1, 4. (RZhRadiot, 10/75, 10Ye31)
451. Gudzenko, L. I., I. S. Slesarev, and S. I. Yakovlenko (0). Possibility of developing an atomic reactor laser. ZhTF, no. 9, 1975, 1934-1939.
452. Ishchenko, V. N., V. N. Lisitsyn, and V. N. Starinsky (0). Control of radiation divergence in superradiance lasers. KE, no. 7, 1975, 1570. (LC)
453. Kamenov, P., and T. Bonchev (NS). Possibility of realizing a gamma laser with long-lived isomer nuclei. DBAN, no. 9, 1975, 1175-1177.
454. Rivlin, L. A. (0). Relativistic transposition of radiation frequency in opposed photon and electron beams. KE, no. 7, 1975, 1423-1427. (LC)

L. GENERAL LASER THEORY

455. Akhmediyev, N. N. (0). Possibility for excitation of surface waves by two laser beams. OiS, v. 39, no. 4, 1975, 779-781.
456. Amus'ya, M. Ya., and A. S. Baltenkov (4). Electron drag due to absorption of light. ZhETF, v. 69, no. 2, 1975, 547-554.
457. Apanasevich, P. A., and A. P. Nizovtsev (0). Some characteristics of the optical appearance of relaxation. KE, no. 8, 1975, 1654-1664. (LC)
458. Bogdankevich, O. V., S. A. Darznek, M. M. Averev, and V. A. Ushakhin (0). Effect of amplified spontaneous emission on the parameters of a longitudinally pumped laser. KE, no. 8, 1975, 1757-1762. (LC)
459. Brunner, W., E. Klose, and H. Paul (NS). Laser device for obtaining short optical pulses. Patent GDR, no. 39262, issued 20 July 1973. (RZhRadiot, 10/75, 10Ye48)
460. Brunner, W., and H. Paul (NS). Selective intraresonator absorption and spontaneous emission. KE, no. 10, 1975, 2329-2331. (LC)
461. Delone, N. B., V. P. Kraynov, and V. A. Khodovoy (0). Two-level system in a strong optical field. UFN, v. 117, no. 1, 1975, 189-197.
462. Devdariani, A. Z. (0). Dissociation of molecules during slow collisions with atoms. OiS, v. 39, no. 3, 1975, 611-612.
463. Dubrovskiy, V. A., N. B. Lerner, and B. G. Tsikin (99). Theory of the Compton laser. KE, no. 10, 1975, 2292-2302. (LC)

464. Golubev, Yu. M. (12). Spontaneous emission in a resonant medium in a strong traveling wave field. ZhETF, v. 69, no. 3, 1975, 875-881.
465. Gruyev, D. I. (2). Coherent interaction of resonant radiation with multilevel systems. KE, no. 11, 1975, 2487-2492. (LC)
466. Kolokolov, A. A. (0). Sensibilization of two-photon absorption. KE, no. 11, 1975, 2509-2511. (LC)
467. Labzovskiy, L. N., and N. S. Yakovleva (0). Multiphoton processes in atoms. OiS, v. 39, no. 6, 1975, 1009-1014.
468. Lugovoy, V. N. (1). Possibility of frequency scanning of an optical pulse field. ZhETF P, v. 22, no. 8, 1975, 416-419.
469. Manykin, E. A. (16). Superradiance induced in a medium by a fast charged particle and by a coherent optical pulse. ZhETF P, v. 22, no. 11, 1975, 549-552.
470. Matyushkov, V. Ye., and S. A. Mikhnov (0). Possibility of raising the power limit of single-pulse lasers. KE, no. 7, 1975, 1548. (LC)
471. Perlin, Ye. Yu. (0). Transfer of excitation between impurity molecules stimulated by laser radiation. IN: Sb 8, P-193. (RZhKh, 19AB, 22/75, 22B6)
472. Vakhnenko, I. F., Yu. G. Novokhat'ko, and V. M. Filippov (51). Amplification of an e-m wave on reflection from inverted semiconductor films. KE, no. 9, 1975, 2071-2073.
473. Vorontsov, V. I., and V. I. Vysotskiy (51). Kinetics of resonant interaction in a transition regime. Visnyk Kyyiv. un-tu. Ser. fiz., no. 16, 1975, 66-70, 115. (RZhF, 10/75, 10D1046)

474. Voytovich, A. P. (3). Phase-polarization methods for producing frequency-selective losses in the gain circuit of a laser.  
DAN B, no. 11, 1975, 988-991.
475. Zenchenko, V. P., and E. P. Sinyavskiy (44). Behavior characteristics of the second peak of magnetoabsorption in a resonant laser radiation field. FTT, no. 11, 1975, 3398-3399.

## II. LASER APPLICATIONS

### A. BIOLOGICAL EFFECTS

476. Abdullayev, G. B., N. A. Gadzhiev, T. R. Mekhtiyev, Sh. S. Mamedov, A. A. Mamedov, and A. I. Dmitrenko (60, 361). Electroretinogram generated by He-Ne and ruby laser radiation. DAN Az, no. 8, 1975, 77-84.

477. Bocharov, V. V., N. I. Bykova, I. G. Zubarev, Yu. A. Klyavin, A. I. Loginskaya, M. D. Polivoda, and I. A. Prokhorova (0). Effect of laser radiation on the mucous membrane of the stomach of a rabbit. KE, no. 8, 1975, 1837. (LC)

### B. COMMUNICATIONS

#### 1. Beam Propagation in the Atmosphere

478. Abramochkin, A. I., P. P. Vaulin, I. V. Samokhvalov, and A. A. Tikhomirov (0). Device for measuring atmospheric transparency over an inclined path. IN: Sb 5, 279.

479. Abrosova, S. N., M. F. Nebol'sin, V. M. Sazanovich, and S. S. Khmelevtsov (0). Study of the propagation of laser radiation in a model convective randomly inhomogeneous medium. IN: Sb 9, 67-72.

480. Aksenov, V. P., V. A. Banakh, and V. L. Mironov (0). Intensity fluctuation in a reflected laser beam in a turbulent atmosphere. IN: Sb 5, 179.

481. Alekseyev, A. V. (0). Relation of refraction angle to beam path altitude. IN: Sb 5, 215.

482. Alekseyev, I. M., and P. N. Svirkunov (0). Effect of a thermal aureole on the scattering properties of particles. IN: Sb 5, 9.
483. Allenov, M. I. (0). Study of small-scale radiation inhomogeneities in clouds. IN: Sb 5, 25.
484. Almayev, R. Kh., A. F. Nerushev, and L. P. Semenov (0). Fluctuation characteristics of a radiation beam in the presence of regular refraction. IN: Sb 5, 211.
485. Andreyev, B. A., A. V. Burenin, Ye. N. Karyakin, A. F. Krupnov, and S. M. Shchapin (0). Submillimeter spectrum and molecular parameters of  $N_2O$ . IN: Sb 5, 138.
486. Andreyev, Yu. M., V. F. Varyshnikov, S. A. Danichkin, I. V. Samokhvalov, and S. V. Sapozhnikov (0). Effect of mode and power supply circuit on the linearity range of a photomultiplier. IN: Sb 5, 255.
487. Antipov, A. B., and Yu. N. Ponomarev (0). Contour of the absorption lines of atmospheric water vapor in a high-power ruby laser radiation field. IN: Sb 5, 120.
488. Antipov, A. B., and Yu. N. Ponomarev (0). Study of absorption of ruby laser radiation by water vapor. IN: Sb 9, 121-122.
489. Aref'yev, V. N., V. I. Dianov-Klokov, V. F. Radionov, and N. I. Sizov (0). Laboratory measurement of attenuation of  $CO_2$  laser radiation by pure water vapor. OiS, v. 39, no. 5, 1975, 982-983.
490. Aref'yev, V. N., V. I. Dianov-Klokov, and N. I. Sizov (0). Studies of the absorption of  $CO_2$  laser radiation by water vapor. IN: Sb 5, 130.

491. Armand, S. A., and Yu. I. Bekhtin (0). Theoretical estimates for the distribution of the index of refraction of air in the cross-section of a dispersed zone. IN: Sb 5, 81.
492. Armand, S. A., M. A. Kolosov, and L. V. Fedorova (0). Action of millimeter radiation on an aqueous-droplet aerosol. IN: Sb 5, 89.
493. Arshinov, Yu. F., S. A. Danichkin, and I. V. Samokhvalov (0). Use of Raman scattering for measuring atmospheric transparency. IN: Sb 9, 165-169.
494. Arshinov, Yu. F., and S. A. Danichkin (0). Rotational spectra of stimulated Raman scattering in nitrogen and oxygen, and measurement of air temperature. IN: Sb 9, 169-173.
495. Astafurov, V. G., and G. N. Glazov (0). Statistics of photo registry and recording modes of an atmospheric lidar signal. IN: Sb 5, 267.
496. Astafurov, V. G., and G. N. Glazov (0). Potential accuracy and resolution of lidar measurement of an aerosol profile. IN: Sb 9, 186-196.
497. Babenko, V. A., and V. V. Skadarov (0). Scattering of light by a weakly anisotropic spherical particle. IN: Sb 5, 11.
498. Babenko, V. A. (0). Scattering of radiation by a droplet surrounded by a vapor cloud of reduced density. IN: Sb 5, 13.
499. Babushkin, V. V., A. K. Vishnevskiy, Yu. V. Noskov, and V. A. Chistyakov (163). Methods for measuring the propagation of thermal radiation in atmospheric windows over horizontal boundary-layer paths. IN: Tr 5, 91-93. (RZhF, 9/75, 9D810)

500. Balin, Yu. S., G. O. Zadde, G. G. Matviyenko, I. V. Samokhvalov, and V. S. Shamanayev (0). Some results of probing weather formations by a polarized lidar. IN: Sb 9, 183-186.
501. Banakh, V. A., and V. L. Mironov (0). Time fluctuation in intensity of an optical beam in a turbulent atmosphere. IN: Sb 5, 176.
502. Banakh, V. A., and V. L. Mironov (78). Spectra of time fluctuations of intensity of laser radiation propagating in a turbulent atmosphere. KE, no. 10, 1975, 2163-2171. (LC)
503. Bekhtin, Yu. I. (0). Feasibility of developing an optical refractometer. IN: Sb 5, 220.
504. Belen'kiy, M. S., V. V. Boronoyev, N. Ts. Gomboev, E. V. Zubritskiy, V. L. Mironov, and S. S. Khmelevtsov (0). Optical measurement of the pulsation profile of atmospheric refraction index in a mountainous region. IN: Sb 5, 187.
505. Belen'kiy, M. S., A. A. Makarov, V. L. Mironov, and V. V. Pokasov (0). Optical measurements of time variations in the vertical profile of atmospheric structural characteristics. IN: Sb 5, 189.
506. Belen'kiy, M. S., and V. L. Mironov (0). Turbulent blurring of a laser source image. IN: Sb 5, 202.
507. Belen'kiy, M. S., A. F. Zhukov, V. L. Mironov, S. S. Khmelevtsov, and R. Sh. Tsvyk (0). Reconstruction of spatial correlation functions of intensity fluctuations of light from measurements of the averaged action of the aperture. IN: Sb 9, 72-81.

508. Belov, V. F., and G. N. Glazov (0). Numerical calculations for the moments of energy fluctuations of lidar signals from stratus clouds. IN: Sb 5, 68.
509. Belov, V. F., G. N. Glazov, and G. M. Krekov (0). Calculating power fluctuations in lidar probing of a randomly inhomogeneous aerosol. IN: Sb 9, 95-103.
510. Belov, V. V., and G. N. Glazov (0). Some possibilities for lidar measurement of the geometric and optical thickness of clouds. IN: Sb 5, 65.
511. Belov, V. V., G. N. Glazov, and G. M. Krekov (0). Modulation characteristics in laser probing of an atmospheric aerosol. IN: Sb 9, 214-221.
512. Bel'ts, V. A., A. F. Dobrovolskiy, and V. P. Nikolayev (0). Propagation of pulsed radiation at  $10.6 \mu$  through an artificial droplet fog. IN: Sb 5, 102.
513. Belyayev, V. P., O. A. Volkovitskiy, A. F. Nerushev, V. P. Nikolayev, S. D. Pinchuk, and A. M. Skripkin (220). Experimental studies on dispersing fog by  $10.6 \mu$  laser radiation. FAiO, no. 10, 1975, 1075-1078.
514. Beresnev, V. A., P. P. Vaulin, and K. G. Stepanov (0). Device for converting a reflected laser signal. IN: Sb 5, 274.
515. Betkher, R. E., T. O. Viytman, and Kh. V. Khinrikus (255). Experimental study of laser beam fluctuations in an atmospheric path. KE, no. 9, 1975, 1978-1984.

516. Bisyarin, V. P., and V. V. Yefremenko (0). Variation in intensity of scattered light at  $0.63 \mu$  during the evaporation of an aqueous aerosol droplet by c-w  $\text{CO}_2$  laser radiation.  
IN: Sb 5, 99.
517. Bisyarin, V. P. (0). Estimating the root-mean-square radius and concentration of droplets in a fog in terms of attenuation of radiation at two wavelengths. IN: Sb 5, 61.
518. Bisyarin, V. P. (0). Formation of optical inhomogeneities in the vicinity of an evaporating droplet. IN: Sb 5, 91.
519. Bisyarin, V. P., I. P. Bisyarina, M. A. Kolosov, A. V. Sokolov, and G. K. Tret'yakov (0). Decreased transparency of an aqueous aerosol in the transmission zone of a short laser pulse at  $10.6 \mu$ .  
IN: Sb 5, 97.
520. Bondarenko, N. G., V. A. Gaponov, I. V. Yeremina, and V. I. Talianov (0). Modeling of the nonstationary thermal self-action effect of single and multi-mode high power optical beams in the atmosphere. IN: Sb 5, 116.
521. Boronoyev, V. V., N. Ts. Gomboyev, E. V. Zubritskiy, G. F. Malygina, V. L. Mironov, and S. S. Khmelevtsov (0).  
Measuring spatial correlation of intensity in a collimated laser beam.  
IN: Sb 5, 170.
522. Boronoyev, V. V., N. Ts. Gomboyev, and E. V. Zubritskiy (0).  
Structural distribution of the refractive index of air over a horizontal path. IN: Sb 5, 185.
523. Borovoy, A. G., M. V. Kavanov, and V. A. Krutikov (0).  
Calculating the higher statistical moments of a field in a scattering medium. IN: Sb 5, 47.

524. Borovoy, A. G., B. V. Goryachev, G. A. Kaloshin, and B. A. Savel'yev (0). Intensity fluctuations during propagation of spatially bound beams in precipitations. IN: Sb 5, 49.
525. Borovoy, A. G., B. V. Goryachev, G. A. Kaloshin, and B. A. Savel'yev (0). Study of diffusion of impurities in the atmosphere by an optical method. IN: Sb 5, 50.
526. Bukatyy, V. I., Yu. D. Kopytin, S. S. Khmelevtsov, and D. P. Chaporov (0). Nonstationary thermal self-focusing of intense light in an absorption aerosol. IN: Sb 5, 110.
527. Bukatyy, V. I., Yu. D. Kopytin, S. S. Khmelevtsov, and D. P. Chaporov (0). Study of thermal defocusing of laser radiation in a solid aerosol. IN: Sb 5, 111.
528. Bukatyy, V. I., N. I. Mishchenko, S. M. Slobodyan, and D. P. Chaporov (0). Television analyzer of space-time distribution in intensity of laser radiation. IN: Sb 5, 236.
529. Burkov, V. V., V. I. Zhuravlev, and K. D. Shelevoy (0). Test results of the RCSA-1 multichannel system for recording a lidar signal reflected by the atmosphere. IN: Sb 5, 253.
530. Burkov, V. V., G. O. Zadde, G. S. Bayrashin, and Ye. P. Berdichenko (0). The ROSA-1M recorder of laser signals reflected by the atmosphere. IN: Sb 5, 283.
531. Bushmakova, O. V., E. P. Zege, and I. L. Katsev (0). Viewing an object through a cloud layer. IN: Sb 5, 32.
532. Bykov, A. D., Yu. S. Makushkin, and M. R. Cherkasov (0). Effect of a vibrational-rotational interaction on calculating the halfwidths of spectral lines. IN: Sb 9, 151-159.

533. Cherkasov, M. R. (0). Theory of resonant broadening of spectral lines by pressure. IN: Sb 5, 149.
534. Cherkasov, M. R. (0). Theory of line shape using a shock approximation. IN: Sb 5, 151.
535. Demina, L. B., A. G. Petrushin, and V. P. Snykov (0). Study of the relationship of the optical characteristics of a scattering aerosol in model media as a function of relative humidity. IN: Sb 5, 15.
536. Dianov-Klokov, V. I., and V. M. Ivanov (0). Mechanism of absorption of 10.6  $\mu$  laser radiation by atmospheric water vapor. KE, no. 7, 1975, 1579. (LC)
537. Dyatlov, K. N., A. P. Ivanov, V. D. Kozlov, L. V. Nikolayev, M. S. Khutko, and A. P. Chaykovskiy (0). Lidar for spectral and polarization measurements. IN: Sb 5, 252.
538. Dzyaman, D. D. (105). Selection of an effective optical wavelength for geodetic observations in a turbulent atmosphere. IVUZ Geod, no. 2, 1975, 55-59.
539. Filippov, V. L., A. S. Makarov, S. O. Mirumyants, V. P. Ivanov, L. S. Semenov, K. S. Solov'yeva, and R. V. Fedot'yeva (0). Semiautomatic recorder of attenuation of visible and infrared radiation in atmospheric windows. ZhPS, v. 23, no. 5, 1975, 935-939.
540. Genin, V. N., N. V. Genina, and M. V. Kabanov (0). Experimental studies on transmission of an optical image in a scattering layer. IN: Sb 5, 34.
541. Genin, V. N., N. V. Genina, and M. V. Kabanov (0). Transfer of an optical image through a scattering layer. IN: Sb 9, 17-24.

542. Glazov, G. N., and G. A. Titov (0). Statistical characteristics of lidar signals from a broken cloud cover. IN: Sb 5, 63.
543. Glazov, G. N., G. M. Igonin, M. T. Tikhostup, and O. L. Tuzov (0). LDIS lidar for studying atmospheric turbulence. IN: Sb 5, 265.
544. Godlevskiy, A. P., and V. A. Kapitanov (0). Absorption spectrum of a clear atmosphere in the ruby laser radiation range. IN: Sb 5, 132.
545. Godlevskiy, A. P., V. A. Kapitanov, V. P. Lopasov, and S. F. Luk'yanenko (0). Long-lived intermolecular forces and contours of weak absorption lines. IN: Sb 5, 148.
546. Godlevskiy, A. P., V. A. Kapitanov, Yu. S. Makushkin, A. A. Mitsel', and M. R. Cherkasov (0). Analysis of the profile of spectral lines of water vapor in the range of ruby laser radiation. IN: Sb 5, 153.
547. Godlevskiy, A. P., V. P. Lopasov, S. F. Luk'yanenko, and M. M. Makogon (0). Methods for laser spectroscopy of gas media. IN: Sb 9, 104-111.
548. Gomboev, N. Ts., E. V. Zubritskiy, V. V. Boronoyev, and G. F. Malygina (0). Experimental study on the correlation between intensity fluctuation dispersion in laser radiation and wind velocity. IN: Sb 5, 172.
549. Gomboev, N. Ts., E. V. Zubritskiy, G. F. Malygina, V. L. Mironov, and S. S. Khmelevtsov (0). Determining the internal scale of turbulence from optical measurements. IN: Sb 5, 183.

550. Gordin, M. P., and G. M. Strelkov (0). Passage of laser radiation through a fine-droplet aqueous aerosol. RiE, no. 10, 1975, 2009-2016.
551. Gordin, M. P., A. V. Sokolov, and G. M. Strelkov (0). Attenuation of CO<sub>2</sub> laser radiation by a diffusely vaporizable aqueous aerosol. RiE, no. 11, 1975, 2241-2249.
552. Gordin, M. P., A. V. Sokolov, and G. M. Strelkov (0). Variation in the transparency of an aqueous aerosol dispersed by a CO<sub>2</sub> laser beam at 0.63 and 1.06 μ. IN: Sb 5, 71.
553. Gordin, M. P., and G. M. Strelkov (0). Numerical solution for the problem of the passage of CO<sub>2</sub> laser radiation through a polydisperse aqueous aerosol. IN: So 5, 75.
554. Gordin, M. P., and G. M. Strelkov (0). Effect of the coefficient of accommodation on the process of diffused evaporation of an aqueous aerosol under the action of laser radiation. IN: Sb 5, 85.
555. Goryachev, B. V., and B. A. Savel'yev (0). Study of fluctuation processes in scattering media. IN: Sb 5, 51.
556. Goryachev, B. V., B. N. Denchik, and B. A. Savel'yev (0). Laws of propagation of a spatially-bounded radiation flux in scattering media. IN: Sb 9, 56-59.
557. Grachev, Yu. N., and G. M. Streikov (0). Action of a CO<sub>2</sub> laser pulse on an aqueous aerosol. IN: Sb 5, 73.
558. Grachev, Yu. N., and G. M. Strelkov (0). Theory of evaporation of an aqueous droplet under the action of laser radiation. IN: Sb 5, 87.

559. Grigor'yev, Yu. Yu., B. V. Zakharov, and Kh. V. Khinrikus (0). Probing a turbulent atmosphere with an electrooptical recirculator. IN: Sb 5, 228.
560. Grimblatov, V. M., V. A. Presnov, and V. I. Fisher (0). Power limits of a laser probing beam as a function of nonlinear effects. IN: Sb 5, 124.
561. Gurvich, A. S., M. A. Kallistratova, and F. E. Martvel' (0). Strong fluctuations of optical intensity in a turbulent medium with low wave number. IN: Sb 5, 165.
562. Gurvich, A. S., V. I. Kan, and B. F. Potapov (0). Measuring the four-point coherent function of a laser radiation field behind a turbulent shield. IN: Sb 5, 193.
563. Gushchina, I. Ya., M. A. Kolosov, V. N. Pozhidayev, and L. V. Fedorova (0). Propagation of ultraviolet radiation in the earth's atmosphere. IN: Sb 5, 17.
564. Il'in, S. I., V. A. Reshetnikov, and N. Ye. Rodionov (0). Complex for automated processing of statistical information for studying fluctuations in laser radiation. IN: Sb 5, 240.
565. Ippolitov, I. I., and S. V. Katyurin (0). Application of hyperspherical coordinates to  $H_2^+$  and  $H_2$  molecules. IN: Sb 5, 159.
566. Irisov, A. L., M. V. Panchenko, B. A. Savel'yev, and V. Ya. Fadeyev (0). Spectral atmospheric nephelometer. IN: Sb 9, 52-56.
567. Ivanenko, B. P., B. S. Kostin, and I. E. Naats (0). Determining the microstructure of an aerosol according to the spectral behavior of the coefficient of absorption. IN: Sb 5, 69.

568. Ivanov, A. P., and I. I. Kalinin (0). Polarization structure of an optical pulse reflected by a turbid layer. IN: Sb 5, 38.
569. Ivanov, A. P., and A. A. Kumeysha (0). Scattering of picosecond pulses by coarse spherical particles. IN: Sb 5, 44.
570. Ivanov, A. P., and A. S. Prikhach (0). Fluctuations in a laser beam reflected by a wavy surface. IN: Sb 5, 45.
571. Ivlev, L. S., O. M. Korostina, V. P. Romanov, G. B. Sochilin (0). Propagation of laser radiation in a medium with light-absorbing particles. IN: Sb 5, 36.
572. Kabanov, M. V., A. A. Pershin, Yu. A. Pkhalagov, and S. M. Sakerin (0). Some features of the attenuation of optical radiation in sea mist. IN: Sb 5, 19.
573. Kalinenko, A. N., and S. D. Tvorogov (0). Scattering of pulsed radiation by spherical particles. IN: Sb 9, 29-34.
574. Kartsivadze, A. I., D. D. Kirkitadze, M. A. Odishariya, and V. A. Chikhladze (62). Dependence of the coefficient of attenuation of laser radiation on the vapor content of artificial fog. Akademiya nauk Gruzinskoy SSR. Soobshcheniya, v. 79, no. 3, 1975, 589-592.
575. Kashkarov, S. S., and K. P. Pogosyan (64, 59). Study of intensity fluctuations of laser radiation at  $10.6 \mu$  in the atmosphere. KE, no. 10, 1975, 2328-2329. (LC)
576. Kaul', B. V., and I. V. Samokhvalov (0). Laser range equation using an approximation of double scattering. IN: Sb 5, 56.
577. Kaul', B. V., and I. V. Samokhvalov (0). Laser range equation for the atmosphere, using an approximation of double scattering allowing for polarization effects. IN: Sb 5, 58.

578. Khinrikus, Kh. V., T. O. Viytrman, and R. E. Betkher (0). Method for complex measurement of parameters of a laser beam propagating in the atmosphere. IN: Sb 5, 226.
579. Knyazev, A. A., A. P. Solov'yev, and B. G. Tsikin (0). Coherent scattering in a homogeneous plasma under simultaneous action of three laser signals. IN: Sb 5, 118.
580. Kolosov, M. A., and V. N. Pozhidayev (15). Possibility of a photochemical action of high power laser radiation on a fog droplet. KE, no. 11, 1975, 2532-2534. (LC)
581. Kolosov, M. A., and V. N. Pozhidayev (0). Possibility of photochemical action of high power laser radiation on a fog droplet. IN: Sb 5, 83.
582. Kon, A. I., V. L. Mironov, and V. V. Nosov (0). Dispersion of optical beam displacements in the atmosphere under conditions of strong intensity fluctuations. IN: Sb 5, 198.
583. Konyayev, P. A. (0). Algorithms for statistical analysis of stationary random processes. IN: Sb 5, 232.
584. Kopytin, Yu. D., and Yu. N. Ponomarev (0). Calculating the nonlinearity of the index of refraction of the atmosphere during probing by high power laser pulses. IN: Sb 5, 121.
585. Kopytin, Yu. D., and S. S. Khmelevtsov (0). Propagation of intense optical pulses in an absorbing randomly heterogeneous medium. IN: Sb 9, 84-94.
586. Korovich, V. Ya., and Ye. V. Ivanov (0). Experimental study of the action of CO<sub>2</sub> laser radiation on a droplet of water. IN: Sb 5, 93.

587. Kostin, B. S., E. V. Makiyenko, and I. E. Naats (0).  
Study of the information content and solution of inverse problems  
in optical probing of an atmospheric aerosol. IN: Sb 9, 208-213.
588. Kostko, O. K. (134). Use of laser ranging in atmospheric  
research (review). KE, no. 10, 1975, 2133-2162. (LC)
589. Kozlov, V. S., M. V. Panchenko, B. A. Savel'yev, V. Ya.  
Fadeyev, and V. G. Tumakov (0). Experimental studies of  
scattering indicatrix in smoke. IN: Sb 5, 3.
590. Krekov, G. M., M. M. Krekova, and S. S. Khmelevtsov (0).  
Numerical solution of the transfer equation of radiation in a medium  
with nonstationary optical properties. IN: Sb 5, 34-47.
591. Krupnov, A. F. (0). New method for line narrowing in gas  
spectroscopes. IN: Sb 5, 247.
592. Kukin, L. M., Yu. N. Nozdrin, V. Ya. Ryadov, L. I. Fedoseyev,  
and N. I. Furashov (0). Determining the level of monomers and  
dimers of water vapor in atmospheric absorption, from measurements  
in the 1.15-1.55 mm range. RiE, no. 10, 1975, 2017-2025.
593. Kushtin, I. F. (0). Calculating refraction of optical beams in the  
atmosphere. IN: Sb 5, 213.
594. Kutelev, A. F., V. A. Komarov, S. Li, A. G. Sidorenko, K. G.  
Stepanov, S. F. Polyaakov, A. K. Abramov, and F. A. Akhmadulin (0).  
Device for measuring meteorological parameters of the atmosphere.  
IN: Sb 5, 271.
595. Kutukov, V. B., and Yu. I. Yalamov (0). Longitudinal and  
transverse movement of solid and liquid aerosol particles in a  
laser beam. IN: Sb 5, 95.

596. Kutukov, V. B., Yu. K. Ostrovskiy, and Yu. I. Yalamov (0). Propagation of a radiation pulse in an aerosol medium with a nonlinear coefficient of scattering. IN: Sb 5, 108.
597. Kuzikovskiy, A. V. (0). Radiative thermal dispersion of a randomly inhomogeneous fog. IN: Sb 5, 127.
598. Lagutin, M. F., N. P. Mustetsov, and V. A. Stonoga (0). Study of atmospheric sodium by an optical ranging method. IN: Sb 5, 60.
599. Lagutin, M. F., N. P. Mustetsov, and Yu. Ye. Megel' (0). Apparatus for studying resonance effects in the upper atmosphere. IN: Sb 5, 244.
600. Lizengevich, A. I., L. I. Nesmelova, S. D. Tvorogov, and V. V. Fomin (0). Coefficients of radiation and absorption for infrared radiation in wings of absorption bands in atmospheric gases. IN: Sb 9, 125-128.
601. Lopasov, V. P., and I. S. Tyryshkin (0). Experimental study on the broadening of the absorption line contour of water vapor by a buffer gas. IN: Sb 5, 146.
602. Lukin, M. L., and V. L. Mironov (0). Intensity fluctuation in an interference pattern generated by the atmosphere. IN: Sb 5, 204.
603. Lukin, V. P., V. V. Podasov, N. S. Time, L. S. Turovtseva, and M. Z. Kholmyanskiy (0). Reconstructing the spectrum of refractive index pulsations in the atmosphere, using optical measurements. IN: Sb 5, 196.

604. Makushkin, Yu. S., and V. G. Tyuterev (0). Solution of equations for a method of contact conversions in the theory of vibrational-rotational spectra of molecules. IN: Sb 9, 129-151.
605. Makushkin, Yu. S., and O. N. Ulenikov (0). Isotopic relationships between intensities of multiaatomic molecules. IN: Sb 5, 155.
606. Markus, F. A., N. I. Murav'yev, Ye. Yu. Zul'karnayeva, and A. M. Cheremukhin (0). Measuring the space-time spectrum of intensity fluctuations of an optical wave, and proof of the hypothetical "frozen" turbulence. IN: Sb 5, 167.
607. Markus, F. A. (0). Space-time spectrum of intensity fluctuations in an optical beam passing through a turbulent atmospheric layer. IN: Sb 5, 191.
608. Mikhaylov, V. M. (0). Decomposition of  $J \geq 2$ ,  $|K| = 2$  rotational levels of a basic rotational state and dipole transitions between decomposed components in polar molecules with  $C_4$ ,  $C_{4v}$  symmetries. IN: Sb 5, 157.
609. Mironov, V. L., and G. Ya. Patrushev (0). Frequency spectrum of fluctuations in the difference of amplitude levels of angularly-spaced optical beams in the atmosphere. KE, no. 8, 1975, 1737-1741. (LC)
610. Mironov, V. L., and V. V. Nosov (0). Frequency spectra of random displacements of an optical beam in the atmosphere. IN: Sb 5, 200.
611. Mironov, V. L., G. Ya. Patrushev, V. V. Pokasov, and L. I. Shavlev (0). Spectra of fluctuations in intensity differences of spatially discrete optical beams. IN: Sb 5, 206.

612. Mironov, V. L., G. Ya. Patrushev, and S. I. Tuzova (0). Fluctuation correlations of levels in angle-spaced optical beams propagating over an inclined path in a turbulent atmosphere. IN: Sb 9, 81-84.
613. Moskalenko, N. I., O. V. Zotov, and S. O. Mirumyants (0). Effect of a vibrational-rotational interaction on the intensity of spectral lines of H<sub>2</sub>O, CO<sub>2</sub> and N<sub>2</sub>O vapors. IN: Sb 5, 136.
614. Murav'yev, N. I., T. A. Postnikova, and A. M. Cheremukhin (0). Experimental study of spatial deviations in laser beam intensity in a turbulent atmosphere. IN: Sb 5, 191.
615. Naats, I. E. (0). Evaluating the efficiency of optical methods for studying the microstructure of an atmospheric aerosol. IN: Sb 9, 202-208.
616. Nechayev, S. Yu., and Yu. N. Ponomarev (0). Characteristics of a photodissociative medium, as measured in experiments on the propagation of a high power optical pulse in it. IN: Sb 5, 123.
617. Nechayev, S. Yu., and Yu. N. Ponomarev (0). Generating population inversion in a system of vibrational levels in a molecular medium under photodissociation. IN: Sb 5, 161.
618. Nechayev, S. Yu., and Yu. N. Ponomarev (0). Deformation of a high power optical pulse during its interaction with I<sub>2</sub> vapor. IN: Sb 9, 123-125.
619. Nelyubin, N. F. (0). Errors in calculating ground-level refraction angle from aerological data. IN: Sb 5, 218.
620. Nerush'ev, A. F., L. P. Semenov (0). Thermal refraction of an optical beam in an evaporating disperse medium in the presence of wind. IN: Sb 5, 77.

621. Pasmanik, G. A., and I. V. Khazanov (0). Nonlinear thermal effects on the deformation of the spectrum of laser radiation propagating in a weakly absorbing atmosphere. IN: Sb 5, 114.
622. Pershin, A. A. Yu. A. Pkhalagov, and V. N. Uzhegov (0). Aerosol attenuation of optical radiation under sea mist conditions. IN: Sb 5, 23.
623. Pershin, A. A. (0). Spatial structure of background noise in the near-horizon region. IN: Sb 5, 26.
624. Pershin, A. A., and S. M. Sakerin (0). Study of the characteristics of brightness contrast at the sea horizon line. IN: Sb 5, 28.
625. Pershin, A. A., and Yu. A. Pkhalagov (0). Characteristics of equipment used in measuring spectral transparency of the atmosphere under field conditions. IN: Sb 5, 242.
626. Pogosyan, K. P., and V. M. Dzhulakyan (0). Intensity fluctuation in laser radiation focused in the atmosphere. IN: Sb 5, 174.
627. Poltoratskiy, B. F., and K. N. Sachkov (0). Correlation of the spectrum of spatial fluctuations of aerosol-scattered light with the spatial distribution function of the particles. IN: Sb 5, 54.
628. Prishivalko, A. P. (0). Possibility of diagnosing homogeneous and two-layer particles in an atmospheric aerosol according to measurements of scattering matrix elements. IN: Sb 5, 5.
629. Prishivalko, A. P. (0). Effect of relative humidity on the elements of an optical scattering matrix caused by systems of homogeneous and inhomogeneous particles in an atmospheric aerosol. IN: Sb 5, 6.

630. Romanov, G. S., and V. K. Pustovalov (0). Establishment of a stationary regime for the process of dispersing cloud media.  
ZhPS, v. 23, no. 4, 1975, 701-704.
631. Romanov, V. P., M. I. Kungurtseva, O. M. Korostina, and L. S. Ivlev (0). Back-scattering of light by nonspherical particles.  
IN: Sb 5, 37.
632. Sakerin, S. M. (0). Passive method for determining the coefficient of attenuation in the atmosphere. IN: Sb 5, 30.
633. Samokhvalov, I. V., A. V. Sosnin, and G. S. Khmel'nitskiy (0). Absorption of tunable CO<sub>2</sub> laser radiation by gas media.  
IN: Sb 5, 129.
634. Savel'yev, B. A., and V. Ya. Fadeyev (0). Complex studies of the optical properties of a polydispersed aqueous aerosol.  
IN: Sb 9, 47-52.
635. Sinitsa, L. N. (0). High resolution intraresonator spectrometer of Nd glass. IN: Sb 5, 249.
636. Skrelin, A. L., and A. A. Kumeysha (0). Evaluating the pass band in scattering media. IN: Sb 5, 40.
637. Skrelin, A. L., A. A. Kumeysha, F. P. Osipenko, and A. P. Chaykovskiy (0). Study of the effect of experiment geometry on the pulse shape of scattered radiation. IN: Sb 5, 42.
638. Slobodyan, S. M., and N. I. Mishchenko (0). Television system for observing and measuring scintillation in a laser beam.  
IN: Sb 5, 238.

639. Smirnov, V. A., and A. A. Zborovskiy (0). Effect of the state of the atmosphere on attenuation of optical radiation in surface communication channels. Radiotekhnika, no. 11, 1975, 3-8.
640. Sulakshina, O. N., and V. G. Tyuterev (0). Probability of the vibrational-rotational transitions:  $v, j - v+1, j'$ ;  $v, j - v+2, j'$ ; and  $v, j - v+3, j'$  in HCl, CO, HF, HI, and HBr molecules. IN: Sb 5, 142.
641. Taklaya, A. A. (0). Experimental study on the probability distribution of atmospheric fluctuations of laser radiation intensity, using circular aperture detection. IN: Sb 5, 181.
642. Tartakovskiy, V. A. (0). Analyzing a two-dimensional interference pattern. IN: Sb 5, 230.
643. Tartakovskiy, V. A. (0). Reconstruction of a wave field from holographic data. IN: Sb 9, 63-66.
644. Tatarskiy, V. I., and T. N. Kharitonova (0). Applying orthogonal statistical expansions to the theory of atmospheric refraction. IN: Sb 5, 210.
645. Terent'yev, Yu. I., and S. S. Khmelevtsov (0). New effect in the appearance of a dispersion element in the interface region of two media with slightly differing refractive indices. IN: Sb 5, 278.
646. Vaulin, P. P., Yu. A. Ivakin, S. S. Khmelevtsov, and I. Ya. Shapiro (0). Device for measuring atmospheric transparency and refractive index fluctuation over ground paths. IN: Sb 5, 281.
647. Veretennikov, V. V., and I. E. Naats (0). Determining the microstructure of an aerosol from polarization measurements. IN: Sb 5, 67.

648. Vikhalem, V. E., A. A. Taklaya, and Kh. V. Khinrikus (255). Study of atmospheric intensity fluctuations of laser radiation at 0.63 and 10.6  $\mu$ . KE, no. 9, 1975, 1910-1914.
649. Vintzenko, I. G., and V. A. Tartakovskiy (0). Holographic methods for atmospheric research. IN: Sb 9, 24-28.
650. Vintzenko, I. G., and E. E. Gerbek (0). Statistical calculations for optical-atmospheric parameters in block file structures. IN: Sb 9, 59-63.
651. Volkovitskiy, O. A., Ye. V. Ivanov, M. P. Kolomeyev, N. K. Kraskovskiy, and L. P. Semenov (220). "Turbulence" effect in a crystalline cloudy medium under the action of CO<sub>2</sub> laser radiation. FAiO, no. 8, 1975, 861-863.
652. Volkovitskiy, O. A., L. N. Pavlova, and V. P. Snykov (0). Attenuation and scattering of radiation by a 0.63  $\mu$  wave in a crystal medium. IN: Sb 5, 8.
653. Volkovitskiy, O. A., A. F. Nerush, and A. M. Skripkin (0). Effect of the parameters of an optical beam on the evaporation of an aqueous aerosol under various conditions. IN: Sb 5, 100.
654. Volkovitskiy, O. A., Ye. V. Ivanov, M. P. Kolomeyev, and L. P. Semenov (0). Formation of a finely dispersed fraction under the action of radiation on a cloud medium. The "turbidizing" effect. IN: Sb 5, 106.
655. Volkovitskiy, O. A., S. D. Pinchuk, and A. M. Skripkin (0). Optical nonuniformity in a dispersed region; intensity fluctuations of laser radiation propagating through it. IN: Sb 5, 168.

656. Vorob'yev, M. I., and A. S. Drofa (0). Experimental study of random refraction of a laser beam in a turbulent atmosphere. IN: Sb 5, 208.
657. Vorob'yev, V. V. (0). Effect of variable velocity of atmospheric movement on the thermal self-action effects of optical beams. IN: Sb 5, 79.
658. Vorob'yev, V. V. (0). Self-focusing of an optical beam in an absorbing medium moving at transonic speed. IN: Sb 5, 80.
659. Voitsekhovskaya, O. K., Yu. S. Makushkin, and O. N. Sulakshina (0). Replication of experimental values of line intensity, based on various sets of electrooptic parameters. IN: Sb 5, 140.
660. Voitsekhovskaya, O. K., Yu. S. Makushkin, and A. A. Mitsel' (0). Analysis of the results in calculating the coefficients of absorption of a single H<sub>2</sub>O line at 6943.8 Å. IN: Sb 5, 134.
661. Voitsekhovskaya, O. K., Yu. S. Makushkin, and V. N. Cherepanov (0). Determining the intensity of lines formed by transitions with high rotational states. IN: Sb 5, 144.
662. Zadde, G. O., V. Ye. Zuyev, V. P. Tarasenko, and N. I. Yurga (0). Determining the static and dynamic characteristics of inhomogeneities in an atmospheric aerosol by correlation processing of laser probe data. IN: Sb 9, 174-179.
663. Zadde, G. O., G. G. Matviyenko, and V. I. Rubtsov (0). Study of the statistical structure of optical radiation scattered during bistatic probing of the atmosphere. IN: Sb 9, 180-182.
664. Zadde, G. O. (0). Polarization bases matched with an electromagnetic wave. IN: Sb 9, 221-225.

665. Zadde, G. O., and G. G. Matviyenko (0). Polarization bases matched with a scattering object. IN: Sb 9, 225-229.
666. Zakharchenko, S. V., V. Yu. L'vov, S. D. Pinchuk, and A. M. Skripkin (0). Experimental study of the interaction of laser radiation with a solid aerosol. IN: Sb 5, 104.
667. Zakharov, B. V., and Kh. V. Khinrikus (0). Method for measuring spectra of atmospheric gases, using a semiconductor laser. IN: Sb 5, 245.
668. Zemlyakov, A. A., V. A. Pogodayev, S. S. Khmelevtsov, and L. K. Chistyakova (0). Mechanisms of destruction of weakly absorbing droplets in intense optical fields. IN: Sb 5, 125.
669. Zheltov, G. P., A. I. Belyakovich, M. V. Grinis, and L. A. Shtan'ko (0). Device for complex study of laser fluctuations at 0.63 and 10.6  $\mu$  over optical communication lines. IN: Sb 5, 234.
670. Zhukov, A. F., A. V. Yefremov, and R. Sh. Tsvyk (0). Study of the spectra of intensity fluctuations of optical radiation propagating in snowfalls. IN: Sb 5, 52.
671. Zhukov, A. F., A. V. Yefremov, V. L. Mironov, S. S. Khmelevtsov, and R. Sh. Tsvyk (0). Study of spectral intensity fluctuations of an optical beam in a turbulent atmosphere. IN: Sb 5, 163.
672. Zuyev, V. Ye., and V. P. Lopasov (0). Complex studies in laser spectroscopy of gaseous media. IN: Sb 5, 269.
673. Zuyev, V. Ye. (0). Problems of atmospheric optics. IN: Sb 5, 3-16.

674. Zuyev, V. Ye., B. V. Kaul', and I. V. Samokhvalov (0). Laser probing of industrial haze. IN: Sb 9, 160-165.
675. Zuyev, V. Ye., G. M. Krekov, M. M. Krekova, E. V. Makiyenko, and I. E. Naats (0). Numerical experiment in multifrequency laser probing of clouds and reconstruction of the spectrum of aerosol particles. IN: Sb 9, 196-201.

## 2. Beam Propagation in Liquids

676. Ambrosimov, A. K., and A. N. Medvedev (0). Remote control and power supply systems for lasers. IN: Sb 10, 166-169.  
(RZhGeofiz, 11/75, 11V20)

## 3. Theory of Propagation

677. Baklanov, Ye. V., and B. Ya. Dubetskiy (10). Square-law Doppler effect allowing for the finite size of an optical beam. KE, no. 9, 1975, 2041-2046.
678. Boyko. B. B., I. Z. Dzhilavdari, and N. S. Petrov (0). Reflection of a plane optical wave from a nonlinear transparent isotropic medium. ZhPS, v. 23, no. 5, 1975, 888-892.
679. Bykovskiy, Yu. A., E. A. Manykin, I. Ye. Nakhutin, and Yu. G. Rubezhnyy (0). Raman scattering by vibrations in the form of a liquid spherical particle. KE, no. 8, 1975, 1803-1306. (LC)
680. Khapalyuk, A. P., and A. I. Kirilenko (0). Laws of reflection and refraction of ordinary plane inhomogeneous waves. ZhPS, v. 23, no. 5, 1975, 893-900.
681. Manakov, N. L., and V. D. Ovsyannikov (137). Alteration of polarization properties of an e-m wave by atoms in external fields. KE, no. 9, 1975, 1943-1951.

682. Rozanov, N. N., V. A. Smirnov, and P. I. Krepostnov (0). Beam separation during self-focusing of limited laser beams. ZhTF P, no. 18, 1975, 830-834.
683. Smirnov, V. N. (0). Possibility of compensating for wavefront distortions arising during passage through a weakly absorbing plate. ZhTF P, no. 11, 1975, 511-514. (RZhF, 10/75, 10D1165)
684. Vorob'yev, V. V., and V. V. Shemetov (0). Thermal self-action of an optical beam in a medium with random inhomogeneities of the index of refraction. KE, no. 7, 1975, 1428-1432. (LC)
685. Yakushkin, I. G. (19). Asymptotic calculation of field intensity fluctuations over a long-track turbulent medium. IVUZ Radiofiz, no. 11, 1975, 1660-1666.

#### 4. Systems

686. Andreyev, Yu. V., V. A. Volokhatyuk, V. M. Kochetkov, R. R. Krasovskiy, and V. I. Feygel's (0). Use of electrooptical modulators for simulation of optical signals. IN: Sb 4, 134-138. (RZhF, 10/75, 10D1511)
687. Anikin, V. I., and L. N. Deryugin, (0). Experimental study of resonant optical effects in two-layer thin films. OiS, v. 39, no. 5, 1975, 956-962.
688. Anikin, V. I., and A. P. Gorobets (0). Study of plane waveguides for integrated optics, prepared by a method of solid-state diffusion. KE, no. 7, 1975, 1465-1470. (LC)
689. Artyukh, Yu. N., G. I. Gotlib, and V. Ya. Zagurskiy (0). Time interval meter for a laser DME. PTE, no. 5, 1975, 262.

690. Belov, A. V., M. M. Bubnov, A. N. Gur'yanov, D. D. Gusovskiy, G. G. Devyataykh, Ye. M. Dianov, A. S. Konov, V. G. Luzhain, Ye. P. Nikitin, A. V. Nikolaychik, A. M. Prokhorov, and A. S. Yushin (1). Low-loss fiber lightguide with a quartz glass core and borosilicate coating. ZhTF P, no. 15, 1975, 689-692.
691. Belov, A. V., M. M. Bubnov, A. N. Gur'yanov, D. D. Gusovskiy, G. G. Devyataykh, Ye. M. Dianov, A. S. Konov, V. G. Luzhain, Ye. P. Nikitin, A. V. Nikolaychik, A. M. Prokhorov, and A. S. Yushin (1). Glass fiber lightguides with low losses. KE, no. 9, 1975, 2103-2105.
692. Bronshteyn, G. S., E. B. Gorodetskiy, B. A. Ivanov, L. I. Pik, and L. I. Khenkin (0). Problem of evaluating the accuracy of optical FME measurements. GiK, no. 9, 1975, 32-37.
693. Budagyan, I. F., V. F. Dubrovin, N. N. Yevtikhiyev, S. N. Kamlyuk, D. I. Mirovitskiy, V. V. Usatyuk, and V. S. Chagulov (0). Electrooptic method for processing and storing integral holographic information. IN: Sb 4, 176-177. (RZhF, 10/75, 10D1525)
694. Bukhtiarova, T. V., A. A. Dyachenko, M. Ye. Zhabotinskiy, Yu. N. Kazantsev, V. P. Mal'tsev, O. A. Kharlashkin, and V. V. Shevchenko (0). Profiled lightguides. RiE, no. 11, 1975, 2374-2377.
695. Drabkin, A. G., V. I. Makkaveyev, and A. A. Chertkov (0). Study of methods for transmitting binary information using a laser in a pulse train regime. RiE, no. 9, 1975, 1826-1831.
696. Drozhzhin, A. N., L. A. Kosovskiy, L. N. Mikhaylova, and K. I. Chamorovskiy (0). Laser television reproducing device. KE, no. 10, 1975, 2353-2354. (LC)

697. Filipovich, B. I. (0). Optical pulse spread in lightguides.  
IN: Sb 4, 110-113. (RZhF, 10/75, 10D1310)
698. Goryainov, A. S., Yu. V. Zavitnevich, D. I. Mirovitskiy, V. L. Nazarov, A. P. Pichugin, Ye. S. Khalatova, and V. I. Shanin (0). Coherent optical method for data imaging with spatial synthesis.  
IN: Sb 4, 50-51. (RZhF, 10/75, 10D1524)
699. Kiselev, V. A., and A. M. Prokhorov (1). Tunnel and diffraction excitation of optical waveguides obtained by a diffusion method.  
KE, no. 9, 1975, 2026-2032.
700. Kolesnik, Ye. S., V. I. Lutsenko, and V. G. Sergeyev (200). Electrooptic DME. Otkr izobr, no. 44, 1975, 493628.
701. Kozlovskiy, V. I., A. S. Nasibov, A. G. Negodov, V. P. Papusha, A. N. Pechenov, and Ya. K. Skasyrskiy (0). Obtaining a television image by means of a laser CRT in a line scanning regime.  
KE, no. 7, 1975, 1587. (LC)
702. Kuz'minov, Yu. S., N. M. Lyndin, A. M. Prokhorov, A. A. Spikhal'skiy, V. A. Sychugov, and G. P. Shipulo (1). Diffusion waveguides of glass and electrooptic crystals.  
KE, no. 10, 1975, 2309-2314. (LC)
703. Makhlin, R. Ye., and I. V. Titov (0). Measuring the reduced coefficient of reflection from the end of an optical fiber in a break in a fiber optic communication line cable. ZhTF P, no. 11, 1975, 517-520. (RZhF, 10/75, 10D1489)
704. Medvedev, V. A., B. M. Stepanov, V. N. Filinov, and V. Yu. El'tekov (0). Multichannel laser communication systems with pulse compression. IN: Sb 11, 15-21. (RZhRadiot, 10/75, 10Ye269)

705. Mikheychev, V. S. (120). Effect of various parameters of a modulator for a geodetic DME on the results of distance measurement. IVUZ Geod, no. 2, 1975, 143-150.
706. Nadtochiy, A. A. (0). Device for processing optical information. Otkr izobr, no. 35, 1975, 485473.
707. Pogorelov, R. Ye., V. P. Red'ko, and L. M. Shteyngart (0). Thin film lightguide consisting of organic compounds of an aromatic series. KE, no. 8, 1975, 1847. (LC)
708. Red'ko, V. P., N. G. Cherenda, and L. M. Shteyngart (0). Problem of developing optical waveguides in fused quartz by means of proton bombardment. KE, no. 8, 1975, 1849. (LC)
709. Saltiyel, S. M. (2). Optimum shift of light waves with finite spectral width. KE, no. 9, 1975, 2088-2090.
710. Savel'yev, Yu. V., and N. A. Lavrinovich (0). Improving the illumination parameters of vidicons using a laser-punctured aperture. IN: Sb 12, 157-161.
711. Ter-Mkrtyan, K. A., K. S. Gyunashyan, and V. V. Ilyasov (224). Field tests of the DVSD-1200 differential high-precision optical DME. IN: Tr 6, 105-109. (RZhGeod, 5/75, 5.52. 140)
712. Zlenko, A. A., V. A. Kiselev, A. M. Prokhorov, A. A. Spikhal'skiy, and V. A. Sychugov (1). Radiation and reflection of light by a corrugated section of a waveguide. KE, no. 11, 1975, 2433-2439. (LC)

### C. COMPUTER TECHNOLOGY

713. Arbuzov, V. A., and V. A. Fedorov (0). Optical realization of the isotropic Gilbert transform. Avtometriya, no. 5, 1975, 27-37.
714. Korobov, I. V., A. F. Plotnikov, Yu. M. Popov, and V. N. Seleznev (1). Reversible recording of optical information in metal-dielectric-semiconductor structures. KE, no. 9, 1975, 2013-2018.
715. Kort, S. I., V. A. Teryayev, V. I. Yanyuk, and M. N. Libenson (0). Thermomagnetic recording of dashed lines on an MnBi film by a laser beam. IN: 13, 168-170. (RZhRadiot, 11/75, 11Ye282)
716. Kostrov, N. A., and M. A. Mayorchuk (0). Compensating for the spectral width of radiation of lasers in holographic memories. KE, no. 8, 1975, 1809. (LC)
717. Kuz'menko, A. V. (0). The Laplace transform in coherent optics and its use in obtaining the Mellin transform. Avtometriya, no. 5, 1975, 22-26.
718. Pyatlin, O. A., V. A. Teryayev, V. N. Markovskiy, S. I. Kort, and V. I. Yanyuk (0). Magnetic tape media for optical memories. IN: Sb 13, 170-173. (RZhRadiot, 11/75, 11Ye281)
719. Vasilevskaya, A. S., I. M. Grodnenskiy, A. S. Sonin, and B. M. Stepanov (141). Optical scattering in a transparent ferroelectric ceramic: a new medium for electrooptics. KE, no. 11, 1975, 2525-2528. (LC)

## D. HOLOGRAPHY

720. Abakumov, B. M., N. D. Baykova, L. N. Gnatyuk, M. L. Gurari, and S. N. Marchenko (0). Obtaining holograms and holographic interferograms on MnBi films. KE, no. 7, 1975, 1595. (LC)
721. Anikin, A. A., and V. K. Malinovskiy (75). Characteristic curve and recording regimes for holograms. KE, no. 9, 1975, 2054-2057.
722. Aristov, V. V., and G. A. Ivanova (0). Some conclusions from the diffraction theory of holography. OiS, v. 39, no. 3, 1975, 563-570.
723. Bakut, P. A., K. N. Sviridov, I. N. Troitskiy, and N. D. Ustinov (0). Study of optimal conditions for recording intensity holograms and optical images. KE, no. 8, 1975, 1688-1692. (LC)
724. Barbanel', I. S. (305). Optimizing the recording of amplitude-phase holograms. ZhNiPFiK, no. 6, 1975, 423-426.
725. Barbanel', I. S., and V. V. Kulikov (0). Diffraction efficiency of matched holographic filters. Avtometriya, no. 5, 1975, 14-22.
726. Bletskan, D. I., I. F. Kopinets, P. F. Pogoretskiy, Ye. N. Sal'kova, and D. V. Chepur (136, 5). The preparation of GeS single crystals, and the study of their morphology and its effect on the recording of holographic lattices. Kristal, no. 5, 1975, 1008-1012.
727. Blokhin, A. S., G. G. Golenko, and I. P. Nalimov (231). Reconstruction of holographic information with a semiconductor laser. TKiT, no. 10, 1975, 54-55.
728. Bogomolov, K. S., L. P. Vakhtanova, E. A. Gruz, and V. D. Petrov (96, 231). Phase reflecting holograms on VR-L and VR-M photoplates. ZhNiPFiK, no. 5, 1975, 344-348.

729. Brusin, I. Ya. (0). Dependence of diffraction effect on the thickness of the hologram. OiS, v. 39, no. 4, 1975, 750-758.
730. Bugayev, A. A., B. P. Zakharchenya, V. M. Ovchinnikov, and F. A. Chudnovskiy (4). Infrared holography on FTIROS recording medium. ZhTF P, no. 13, 1975, 593-596.
731. Bykhovskiy, V. K., and A. Ye. Krasnov (0). Structure of a holographic processor. IN: Sb 4, 169-175. (RZhF, 10/75, 10D1510)
732. Chernov, V. P., and B. B. Gorbatenko (0). Color holographic interferogram. OiS, v. 39, no. 5, 1975, 963-966.
733. Gariyev, A. M., A. S. Kuniskiy, and Ye. T. Myachin (286). Synthesis of holograms by selection of noncoherent fixed images, intended for electron-microscopic analysis. KE, no. 10, 1975, 2303-2308. (LC)
734. Ginzburg, V. M. (0). Some methods of distinguishing the characteristic markings of images. RiE, no. 11, 1975, 2357-2362.
735. Ivakin, Ye. V., I. F. Petrovich, A. S. Rubanov, and B. I. Stepanov (0). Dynamic holograms in an amplifying medium. KE, no. 7, 1975, 1556. (LC)
736. Kakichashvili, Sh. D., and T. N. Kvinikhidze (0). Polarization recording of holograms with a reference wave of arbitrary polarization. KE, no. 7, 1975, 1449-1453. (LC)
737. Kaplun, I. V., and A. P. Kurochkin (0). Study of random errors in holographic methods for determining the directional characteristics of antennas. RiE, no. 10, 1975, 2038-2045.

738. Karpov, L. P., E. I. Krupitskiy, and A. A. Rizkin (0).  
Circuit synthesis of holographic correlators. IN: Sb 14, 39-49.  
(RZhF, 9/75, 9D1016)
739. Keprt, J., and M. Hrabovsky (NS). Holographic interferometry using conventional photographic materials. Jemna mechanika a optika, no. 9, 1975, 255-257.
740. Kirkach, Ye. F., A. A. Kikineshi, D. G. Semak, G. I. Bigun, and A. A. Karpenko (136). Study of holographic recording on amorphous As-Se layers. UFZh, no. 12, 1975, 1950-1952.
741. Komar, V. G., and V. I. Mandrosov (231). Recording panoramic holograms in partially coherent radiation. ZhNiPFIK, no. 6, 1975, 451-453.
742. Kostyshin, M. T., Ye. P. Krasnozhenov, V. A. Makeyev, P. F. Romanenko, G. A. Sobolev, G. Kh. Fridman, and V. I. Shanin (6). Holograms using light-sensitive semiconductor-metal systems. KE, no. 9, 1975, 2033-2036.
743. Makhmutov, E. G. (0). Information capacity of the null order of three-dimensional dielectric holograms. OiS, v. 39, no. 6, 1975, 1181-1182.
744. Maklakov, V. V. (366). Holographic interferometry of speech articulation. UFZh, no. 12, 1975, 2052-2053.
745. Men'shikh, O. F. (0). Device for total recording of information on a wave field. Otkr izobr, no. 34, 1975, 484485.
746. Mityakov, V. G., and V. B. Fedorov (0). Aberrations in the imaging field, and information capacity of microholograms during recording and readout by radiation sources with various wavelengths. OiS, v. 39, no. 5, 1975, 951-955.

747. Nemtinov, V. B., and O. V. Rozhkov (0). Nonlinear distortions of thin phase holograms recorded on photothermoplastic.  
IN: Sb 14, 78-84. (RZhF, 9/75, 9D1022)
748. Pan'shin, I. A., Ye. A. Podpalyy, and T. F. Stankevich (0). Regimes for recording holographic information on manganese-bismuth films. IN: Sb 4, 131-134. (RZhF, 10/75, 10D1274)
749. Pan'shin, I. A., Ye. A. Podpalyy, and T. F. Stankevich (308). Use of magnetic films for holographic interferometry.  
ZhNiPFiK, no. 6, 1975, 450-451.
750. Pochernyayev, I. M., V. L. Strizhevskiy, V. M. Klimenko, and F. N. Marchevskiy (0). Effect of the physical nature of noise on the dynamic range of thermoplastic information carriers.  
KE, no. 8, 1975, 1795-1802. (LC)
751. Podanchuk, D. V., and M. Yu. Bazhenov (0). Holographic recording of radiation polarization on photoplastic carriers. IN: Sb 14, 16-18. (RZhF, 9/75, 9D1021)
752. Polze, S., and W. Richter (NS). Method for obtaining synthetic holograms. Patent GDR, no. 95125, issued 12 January 1973.  
(RZhFoto, 9/75, 9.46.45)
753. Ruzek, J., and J. Muzik (NS). Some problems of color holography.  
Jemna mechanika a optika, no. 10, 1975, 298-299.
754. Shennagel', G. (0). Recording and readout of three-dimensional holograms in diffraction-limited systems. KE, no. 8, 1975, 1622-1623. (LC)
755. Sidorovich, V. G., and D. I. Stas'ko (0). Possibility of correcting optical beams by means of three-dimensional dynamic phase holograms. ZhTF P, no. 9, 1975, 424-427. (RZhF, 11/75, 11D1232)

756. Sterligov, V. A., and V. A. Tyagay (0). Electrochemical recording of holograms on the surface of CdSe films. ZhTF P, no. 15, 1975, 704-708.
757. Tsyrul'nikov, D. A. (0). Hologram image formation according to laws of geometric optics. ZhNiPFIK, no. 6, 1975, 461-463.
758. Vasil'yev, V. N. (118). Modulation-transmission function of phase holograms. KE, no. 10, 1975, 2338-2340. (LC)
759. Vaytkus, Yu., Yu. Vishchakas, and K. Yarashyunas (49). Properties of dynamic and pulsed holograms on semiconductor materials. KE, no. 9, 1975, 2068-2071.
760. Volkov, I. V. (0). Measuring the field of displacements and deformations of a natural image near the stress concentrator by means of "speckle" holography. Problemy prochnosti, no. 9, 1975, 89-91.
761. Yaroslavskaya, N. N., O. V. Andreyeva, and V. I. Sukhanov (7). Thermal method for improving the sensitivity of photographic materials for recording three-dimensional holograms. OMP, no. 9, 1975, 55-57.
762. Yesayan, Yu. V., R. V. Akopov, N. Ts. Tatevosyan, and M. Zh. Yeganyan (0). Effect of warmup on reverse recording of holograms on As<sub>2</sub>S<sub>3</sub> chalcogenide films. ZhTF P, no. 15, 1975, 728-731.
763. Zeylikovich, I. S., and V. A. Kcmissaruk (0). Band localization in holographic interferometry of phase objects with diffuse scatterers. OiS, v. 39, no. 5, 1975, 985-987.
764. Zeylikovich, I. S., and N. M. Spornik (0). Holographic interferometer for studying spatial phase objects. ZhTF P, no. 12, 1975, 551-553.

765. Zhivotov, V. K., and M. F. Krotov (0). Holography with a Fabry-Perot interferometer. DAN SSSR, v. 224, no. 5, 1975, 1053-1055.

766. Zubov, V. A., and T. I. Kuznetsova (0). A method for taking motion pictures during continuous exposure of the moving film. KE, no. 7, 1975, 1573. (LC)

#### E. LASER-INDUCED CHEMICAL REACTIONS

767. Akulin, V. M., S. S. Alimpiyev, N. V. Karlov, and L. A. Shelepin (1). Mechanism of collisionless dissociation of multiaatomic molecules in a high power laser field. ZhETF, v. 69, no. 3, 1975, 836-841.
768. Ambartsumyan, R. V., and V. S. Letokhov (0). Collisionless dissociation of multiaatomic molecules in a strong infrared laser field and its application to isotope separation. UFN, v. 117, no. 3, 1975, 568-570.
769. Ambartsumyan, R. V., Yu. A. Gorokhov, V. S. Letokhov, G. N. Makarov, and A. A. Puretskiy (72). Selective dissociation under excitation by a strong IR field of weak composite vibrations of multiaatomic molecules. ZhETF P, v. 22, no. 7, 1975, 374-377.
770. Ambartsumyan, R. V., V. S. Letokhov, S. A. Maksimov, V. I. Mishin, and N. P. Furzikov (0). Method of selective excitation of molecules by a laser with an absorption cell in the resonator. KE, no. 8, 1975, 1851. (LC)
771. Ambartsumyan, R. V., Yu. A. Gorokhov, V. S. Letokhov, G. N. Makarov, Ye. A. Ryabov, and N. V. Chekalin (72). Separation of  $B^{10}$  and  $B^{11}$  isotopes in a strong IR field of a  $CO_2$  laser. KE, no. 10, 1975, 2197-2201. (LC)

772. Askar'yan, G. A., and V. A. Namiot (0). Resonant effect on atoms on the surface of and on atoms within molecules; selective buildup, selective readsorption and adsorption; excitation of a nonlinear oscillator by a set of resonant frequencies or by internal transitions.  
ZhTF P, no. 11, 1975, 646-649. (RZhF, 10/75, 10D1182)
773. Basov, N. G., E. M. Belenov, V. A. Isakov, Yu. S. Leonov, Ye. P. Markin, A. N. Orayevskiy, V. I. Romanenko, and N. B. Ferapontov (1). Condensation of a vibrationally excited gas.  
ZhETF P, v. 22, no. 4, 1975, 221-225.
774. Basov, N. G., and O. N. Krokhin (0). A new direction in quantum electronics: laser chemistry. Bild und Ton, v. 28, no. 4, 1975, 124-125. (RZhKh, 19I, 21/75, 21I30)
775. Belenov, E. M., V. A. Isakov, Ye. P. Markin, A. N. Orayevskiy, and V. I. Romanenko (0). Isotope separation in chemical reactions occurring under thermodynamically nonequilibrium conditions.  
ZhTF, no. 9, 1975, 1940-1947.
776. Belenov, E. M., V. A. Isakov, Ye. P. Markin, and V. I. Romanenko (0). Effect of rotational relaxation on laser-induced chemical reactions. KE, no. 8, 1975, 1629-1632. (LC)
777. Belenov, E. M., V. A. Isakov, and V. I. Romanenko (0). Rates of chemical reactions stimulated by laser radiation.  
KE, no. 8, 1975, 1633-1637.
778. Berkovskiy, B. M., and L. P. Ivanov (0). Photochemical mechanism of self-action of light waves. KE, no. 8, 1975, 1838. (LC)
779. Eydus, Ya. A., E. A. Silin'sh, and V. P. Tizika (0). Some features of the action of CO<sub>2</sub> laser radiation on pyrophosphates in the solid state. ZhPS, v. 23, no. 5, 1975, 795-798.

780. Galochkin, V. T., S. I. Zavorotnyy, V. N. Kosinov, A. A. Ovchinnikov, and A. N. Orayevskiy (1). Induced electric conductivity from resonant excitation by infrared laser radiation. ZhETF P, v. 22, no. 3, 1975, 153-155.
781. Golger, A. L., and V. S. Letokhov (0). Amplification in a mixture of isotopic CO<sub>2</sub> molecules under pumping by CO<sub>2</sub> laser radiation. KE, no. 7, 1975, 1508-1518. (LC)
782. Gordiyets, B. F., Sh. S. Mamedov, and L. A. Shelepin (0). Probability of intramolecular vibrational transitions and stimulation of chemical reactions in liquids by infrared laser radiation. IN: Sb 8, G-58. (RZhKh, 19AB, 22/75, 22B1140)
783. Gordiyets, B. F., A. I. Osipov, and V. Ya. Panchenko (0). Elementary processes, dissociation reaction constant and law of active masses in reactions stimulated by laser radiation. IN: Sb 8, G-59. (RZhKh, 19AB, 22/75, 22B1139)
784. Gordiyets, B. F., and Sh. S. Mamedov (1). Isotope separation in chemical reactions of vibrationally excited molecules. KE, no. 9, 1975, 1992-1996.
785. Karlov, N. V., N. A. Karpov, and Yu. N. Petrov (0). Nonequilibrium excitation of a vibrational spectrum in boron trichloride by CO<sub>2</sub> laser radiation. KE, no. 7, 1975, 1563. (LC)
786. Karlov, N. V., Yu. B. Konev, and A. M. Prokhorov (1). Selectivity of two-step photoionization of atoms. KE, no. 11, 1975, 2453-2457. (LC)
787. Karlova, Ye. K., N. V. Karlov, G. P. Kuz'min, B. N. Laskorin, A. M. Prokhorov, N. P. Stupin, and L. B. Shurmel' (1). Shift of chemical equilibrium in solutions under resonant excitation by IR laser radiation. ZhETF P, v. 22, no. 9, 1975, 459-461.

788. Keszthelyi, C. P. (NS). Laser chemistry. Part 5. Electrogenerated chemiluminescence and electrochemistry in a laser cavity. Acta phys. et chem. Szeged., v. 20, no. 4, 1974(1975), 365-369. (RZhKh, 19AB, 16/75, 16B1263)
789. Klimenko, A. G., E. A. Klimenko, and V. I. Donin (10). Using an argon laser beam to restore ion-doped amorphous silicon to the single crystal state. KE, no. 10, 1975, 2356-2358. (LC)
790. Letokhov, V. S. (72). Laser control of selective reactions. Wissenschaft und Fortschritt, no. 10, 1975, 450-456.
791. Molin, Yu. N., V. N. Panfilov, and A. K. Petrov (0). Prospects for using gas lasers to trigger chemical reactions. IN: Sb 1, 2-3. (RZhRadiot, 10/75, 10Ye277)
792. Neporent, B. S., A. G. Makogonenko (7). Interference nature of a "slit" formed by laser radiation in continuous absorption spectra of dye solutions. ZhETF P, v. 22, no. 11, 1975, 542-544.
793. Novobrantsev, I. V., and A. N. Starostin (98). Decay instability of vibrational relaxation, and threshold effects in multimode molecules under the action of resonant radiation. ZhTF P, no. 17, 1975, 801-805.
794. Orayevskiy, A. N., A. V. Pankratov, A. N. Skachkov, and G. V. Shmerling (0). Kinetics of threshold luminescence and bleaching in SF<sub>6</sub> and BC<sub>1</sub><sub>3</sub> gases excited by resonant CO<sub>2</sub> laser radiation. KE, no. 8, 1975, 1725-1730. (LC)
795. Sagun, Ye. I., and B. M. Dzhagarov (3). Study of associated shapes of pheophytin-a molecules under laser photoexcitation. IAN Fiz, no. 9, 1977-1980.

796. Stepanov, A. A., and V. A. Shcheglov (0). Distribution by vibrational levels of molecules formed in chemical reactions. KE, no. 7, 1975, 1379-1389. (LC)
797. Strokach, Yu. P., S. G. Kuz'min, V. F. Mandzhikov, and V. A. Barachevskiy (174). Interaction of ruby laser radiation with a transparent solution of photochromic spiropyran. KE, no. 10, 1975, 2202-2206. (LC)
798. Zaslonko, I. S., S. M. Kogarko, Ye. V. Mozzhukhin, and Yu. K. Mukoseyev (67). Kinetics of energy release in the thermal decay process of  $\text{HN}_3$ . KiK, no. 5, 1975, 1111-1117.

#### F. INSTRUMENTATION AND MEASUREMENT

##### 1. Measurement of Laser Parameters

799. Balashov, A. A., I. A. Khripchenko, and Ye. A. Chernov (137). Instrument for measuring the radiation characteristics of a  $\text{CO}_2$  laser. PTE, no. 5, 1975, 181-183.
800. Belonuchkin, V. Ye., N. I. Yeskin, S. M. Kozel, Ye. P. Kuznetsov, and G. R. Lokshin (118). Using a regenerative laser amplifier for photodetection of scattered coherent radiation. KE, no. 9, 1975, 2081-2084.
801. Berger, N. K., V. V. Dembovetskiy, and A. V. Mikheyenko (0). Methods of measuring phase distribution in a laser beam. IN: Sb 5, 222.
802. Bessmel'tsev, V. P., V. V. Vorob'yev, and V. A. Khanov (0). Stabilizing the difference frequency in a two-frequency laser. Avtometriya, no. 5, 1975, 94-96.

803. Dukhanina, M. I., G. I. Rukman, Ye. A. Sokolov, and A. V. Khromov (0). Instrument for measuring the power density of laser radiation. IT, no. 10, 1975, 33.
804. Kas'yanov, N. D., V. I. Lukovnikov, K. L. Pesterev, V. S. Titov, and R. Sh. Tsvyk (0). Refractometer for laser radiation. IN: Sb 5, 276.
805. Kats, M. L., V. A. Sedel'nikov, and V. V. Tuchin (0). Determining the dispersion and Doppler line widths in the operating transition of a gas laser. IN: Sb 2, 11-15. (RZhF, 11/75, 11D1185)
806. Khanov, V. A., and A. P. Shebanin (0). Stabilization of high power laser radiation by a thin-layer metal absorption attenuator. Avtometriya, no. 5, 1975, 87-90.
807. Lobachev, M. I., E. M. Rabinovich, and V. V. Tuchin (0). Methods of measuring fluctuations in position and diameter of a laser beam. IN: Sb 5, 224.
808. Makowska, E., T. Adamowicz, and W. Wolinski (NS). Measurement of gains and losses in He-Ne and Ar<sup>1+</sup> lasers by the attenuation method. Elektronika, no. 7-8, 1975, 306-308.
809. Malyutin, A. A., and P. A. Pal'yanov (0). A characteristic of recording a sequence of optical pulses. IN: Sb 5, 261.
810. Melamid, A. Ye., and A. M. Potapov (0). Characteristics of photoelectronic multipliers operating with pulsed lasers. PTE, no. 4, 1975, 165-167.
811. Plyusnin, I. I. (0). Device for measuring parameters of pulses in the nanosecond range. IN: Sb 5, 263.

812. Polyakov, Yu. A., S. M. Zakharov, and A. V. Klygin (0). Method of brief exposure in measurement of the distribution of radiative fluxes of a c-w laser. TVT, no. 4, 1975, 825-829.
813. Seltmann, G., and G. Jakob (NS). Controlling the directional stability of a laser beam and the effect of refraction. Vermessungstechnik, no. 8, 1975, 290-292.
814. Virga, S. A., S. G. Zaytseva, N. V. Sukhanova, and A. I. Churbakov (0). Study on the possibility of measuring the wavelength of a pulsed laser by a method of spatial coding. IN: Sb 15, 27-28. (RZhF, 11/75, 11D1188)
815. Volkov, V. F., and Ye. M. Kovrigin (0). Apparatus for experimentally determining the precision of time interval measurement in a pulsed laser system. IN: Sb 5, 259.

## 2. Miscellaneous Measurement Applications

816. Abakumov, G. A., V. I. Kozhenkov, A. P. Simonov, V. V. Fadeyev, and N. A. Fuks (122). Use of a dye laser with flashlamp pumping for determining the size of fog droplets. KE, no. 11, 1975, 2511-2513. (LC)
817. Akulov, G. P., and S. A. Zubko (237). Controlling plane-parallelism of transparent substrates by holographic interferometry. IAN B, no. 4, 1975, 72-76.
818. Anzin, V. B., M. V. Glushkov, V. P. Zharov, Yu. V. Kosichkin, V. O. Shaydurov, and A. M. Shirokov (0). Use of a frequency-tunable GaAs injection laser for optoacoustic detection of absorption in hydrogen fluoride molecules. KE, no. 7, 1975, 1403-1408. (LC)

819. Arapova, E. Ya., A. A. Isayev, M. A. Kazaryan, S. V. Markova, G. G. Petrash, Yu. P. Timofeyev, and S. A. Fridman (0). Infrared laser projection microscope. KE, no. 7, 1975, 1568. (LC)
820. Arnautov, G. P., Ye. N. Kalish, and Yu. F. Stus' (0). Measuring the acceleration of free fall by a multistage method. Avtometriya, no. 5, 1975, 38-43.
821. Atutov, S. N., V. P. Bessmel'tsev, V. N. Burnashov, V. V. Vorob'yev, V. P. Koronkevich, A. I. Lohmatov, V. S. Sobolev, and V. A. Shatalov (0). Angular and linear displacement meter based on a two-frequency laser. Avtometriya, no. 5, 1975, 48-53.
822. Avdeyenko, N. S., and V. I. Sokolov (0). Current possibilities for observing deformations in a mountain massif by means of laser techniques. IN: Sb 16, 93-95. (RZhMekh, 9/75, 9V622)
823. Barantsov, V. I., L. T. Bolotskikh, A. Ya. Litvinenko, A. K. Popov, and G. Kh. Tartakovskiy (0). Nonlinear phenomena in laser spectroscopy. IN: Sb 2, 7-11. (RZhF, 11/75, 11D1041)
824. Barill, G. A., and S. A. Timokhin (0). Noise caused by overlap of signals from various frequencies in laser Doppler velocimeters. Avtometriya, no. 5, 1975, 60-66.
825. Baskakov, O. I., M. V. Moskiyenko, and S. F. Dyubko (0). Study of the rotational spectrum of HCOOH, DCOOH, HCOOD, and DCOOD molecules in the submillimeter range. ZhPS, v. 23, no. 4, 1975, 692-695.
826. Bessmel'tsev, V. P., V. N. Burnashov, and V. V. Vorob'yev (0). Problem of estimating distance and displacement by laser interferometers. Avtometriya, no. 5, 1975, 80-84.

827. Bessmel'tsev, V. P., V. N. Burnashov, and V. V. Vorob'yev (0). Frequency subtractor using integrated logic elements. Avtometriya, no. 5, 1975, 90-91.
828. Botrov, A. V., Kh. Ye. Sterin, V. B. Podobedov, A. M. Pyndyk, L. P. Malyavkin, Yu. G. Vayner, and V. V. Zolotarev (0). Remote recording of Raman scattering spectra. OiS, v. 39, no. 5, 1975, 886-891.
829. Bogomolov, A. S., Ye. S. Romashev, and V. G. Seleznev (199). Quantitative estimate of various cases of loading of cylindrical shells in holographic interferometry. Prikladnaya mehanika, no. 10, 1975, 115-118.
830. Bogoslovskiy, G. S., and V. A. Usin (0). Some requirements for optical equipment for modeling SHF antennas. Metrologiya, no. 10, 1975, 63-72.
831. Bredikhin, V. I. (8). System for studying two-photon absorption spectra. PTE, no. 5, 1975, 187-188.
832. Bugarinovic, Dj. (NS). Laser gyroscope. Nauc-tehn. pregl. VTI, v. 25, no. 1, 1975, 93-98. (RZhF, 9/75, 9D992)
833. Burmakov, A. P., V. A. Zaykov, and A. A. Labuda (87). Study of a turbulent plasma jet by the method of holographic interferometry. Belorusskiy universitet. Vestnik, ser. 1, no. 2, 1975, 96-97. (RZhF, 1C'75, 10D1295)
834. Bykov, V. N., and M. Ye. Lavrent'yev (368). Holographic system for studying two-phase flows. IN: Sb 17, 89-92. (RZhMekh, 9/75, 9B980)

835. Danileyko, M. V., V. R. Kozubovskiy, A. P. Nedavniy, and M. T. Shpak (5). Precise measurements of the infrared Zeeman spectrum of methane by means of a ring laser. ZhETF P, v. 22, no. 5, 1975, 313-316.
836. Dobrova, S. Ya., A. V. Zolotov, N. Ye. Levandovskaya, V. P. Mayorov, A. K. Movshev, A. V. Popova, Ye. I. Finkel'shteyn, and V. I. Khalimonov (0). The FOU-1 industrial laser displacement meter. Avtometriya, no. 5, 1975, 43-48.
837. Domareva, T. M., N. V. Trofimova, Ya. A. Raykhman, and V. I. Chukhlib (0). Laser interferometer for scales. IT, no. 11, 1975, 51-53.
838. Dubnishchev, Yu. N. (75). Laser Doppler flowmeter. Author's certificate USSR, no. 401221, issued 20 January 1975. (RZhRadiot, 9/75, 9Ye361)
839. Dubnishchev, Yu. N., and Yu. G. Vasilenko (75). Device for measuring speed of motion. Author's certificate USSR, no. 413892, issued 17 February 1975. (RZhRadiot, 9/75, 9Ye364)
840. Fokin, V. S. (0). Mode-locked laser for testing photo spark gaps. IN: Sb 15, 60-61. (RZhF, 10/75, 10D1252)
841. Fradkin, E. Ye. (0). Correct description of the interaction of unidirectional waves in laser spectroscopy. OiS, v. 39, no. 6, 1975, 1178-1181.
842. Gayday, Yu. A., I. I. Kondilerko, and A. A. Solomko (51). Diffraction of laser radiation by spin waves in YIG. FTT, no. 10, 1975, 2941-2943.

843. Godlevskiy, A. P., and S. F. Luk'yanenko (0). Calibration of a laser spectrometer based on the method of selective resonator loss. IN: Sb 5, 251.
844. Godlevskiy, A. P., V. P. Lopasov, and M. M. Makogon (0). Special laser operating regimes for solving problems in laser spectroscopy. IN: Sb 9, 117-120.
845. Grokholskiy, A. L., and V. M. Zemlyanskiy (0). Laser Doppler velocimeter with a wide dynamic range. IN: Sb 18, 41-46. (RZhRadiot, 9/75, 9Ye360)
846. Il'yankov, A. I. (0). Use of the optical Doppler effect for measuring vibrations under industrial conditions. Avtometriya, no. 5, 1975, 85-87.
847. Irisov, A. L., V. S. Kozlov, B. A. Savel'yev, and V. Ya. Fadeyev (0). Laboratory spectral nephelometer. IN: Sb: 5, 257.
848. Ivanov, V. P., V. P. Klochkov, L. F. Kozlov, and V. I. Orlanov (0). Study of the development of laminar flow at the inlet of a plane channel by means of a laser Doppler velocimeter. MZhiG, no. 5, 1975, 175-178.
849. Khaykin, B. Ye., and F. M. Shaverdyan (339). Operation of the shift in an optical tabular processor. KE, no. 11, 1975, 2525-2518. (LC)
850. Kolbanovskaya, N. A., A. M. Morozov, I. A. Pan'shin, and Ye. A. Podpalyy (308). Nondestructive readout of analog information by a magnetooptic method with thin film stripe-domain carriers. ZhNiPFIK, no. 6, 1975, 455-457.
851. Kolychev, A. M., B. S. Rinkevichyus, and V. L. Chudov (0). Two-component optical Doppler velocimeter with an ultrasonic modulator. RiE, no. 10, 1975, 2215-2219.

852. Kompanets, O. N., A. R. Kukudzhanov, V. S. Letokhov, V. G. Minogin, and Ye. L. Mikhaylov (0). Nonlinear laser spectroscopy of OsO<sub>4</sub> single isotopic molecules. IN: Sb 1, 90. (RZhRadiot, 10/75, 10Ye255)
853. Kulybin, V. M. (19). Three-component optical Doppler velocimeter. IVUZ Fiz, no. 10, 1975, 82-86.
854. Kulybin, V. M. (19). Use of a dual-wave argon laser in an optical Doppler velocimeter. IN: Sr 3, 80-82. (RZhF, 9/75, 9D994)
855. Kuznetsov, Yu. V. (116). Use of a holographic memory in a phased antenna array control system. IN: Tr 7, 68-72. (RZhF, 9/75, 9Zh299)
856. Lenkova, G. A. (0). Polarization phenomena in laser displacement interferometers. Avtometriya, no. 5, 1975, 66-72.
857. Lisitsyn, V. S., Yu. M. Nadezhkin, and L. A. Kirillova (0). Measuring the reflection coefficients of a mirror. PTE, no. 4, 1975, 183-184.
858. Macek, K. (NS). Using a laser for tunnelling and laying pipelines in mine galleries. Geodeticky a kartograficky obzor, no. 8, 1975, 222-225.
859. Melamud, G. B., and V. N. Mironov (140). Study of a laser flowmeter for gases based on a ring laser. IN: Tr 8, 68-71. (RZhKh, 19I, 16/75, 16II164)
860. Ostrovskiy, A. S., I. N. Rallev, and T. D. Ivanova (106). Dynamic transparency for a coherent optical correrometer. Otkr izobr, no. 33, 1975, 483681.

861. Pestov, Ye. N., and P. V. Mokrenko (115). Study of the stability of a quantum converter for precision measurement of a direct current. KE, no. 10, 1975, 2183-2188. (LC)
862. Petrov, G. D., V. L. Rovinskiy, and V. M. Sobolevskiy (140). Measuring the dispersity of products of thermal destruction in a boundary layer. TVT, no. 5, 1975, 1090-1093.
863. Pokryvaylo, N. A., D. A. Prokopchuk, and Z. P. Shul'man (180). Use of a laser Doppler anemometer for studying a turbulent current in polymer solutions. I-FZh, v. 29, no. 6, 1975, 970-976.
864. Polovinko, V. V. (0). Problem of optical probing of a sea medium. IN: Sb 19, 153-157. (RZhF, 9/75, 9D819)
865. Povkh, I. L., A. B. Stupin, S. N. Maksyutenko, P. V. Aslanov, Ye. A. Roshchin, and A. N. Tur (89). Using a laser anemometer to study a turbulent current in solutions of surface-active substances. I-FZh, v. 29, no. 5, 1975, 853-856.
866. Prokopenko, V. T., V. S. Rondarev, and A. D. Yas'kov (30). Measuring slight tapering by a narrow beam of coherent radiation. PTE, no. 4, 1975, 185.
867. Rinkevichyus, B. S., V. I. Smirnov, and V. L. Chudov (19). Study of a differential circuit for an optical Doppler velocimeter. IN: Tr 3, 58-65. (RZhF, 10/75, 10D1250)
868. Ritus, A. I. (1). Piezoelectrically scannable Fabry-Perot interferometer based on the IT-28-30 model with a base of 2.5-6 mm. KE, no. 9, 1975, 2091-2092.
869. Shelkov, G. A., and Y. Shyuler (52). Interferometer with automatic information display for measuring the dependence of the index of refraction of a gas on the pressure. PTE, no. 5, 1975, 189-191.

870. Sil'dos, I. R., L. A. Rebane, A. B. Treshchalov, and A. E. Lykhmus (1). Luminescence of oxygen molecule vapor under laser excitation. ZhETF P, v. 22, no. 6, 1975, 321-324.
871. Skazka, V. S. (32). Determining the coefficients of gradual diffusion of dissolved macromolecules according to the Doppler broadening of the contour of the Rayleigh scattering line. Vysokomolekulyarnyye soyedineniya, no. 11, 1975, 2607-2609.
872. Smirnov, V. I., and A. P. Terent'yev (19). Use of a laser anemometer for studying nonuniform turbulent flows. IN: Tr 3, 71-76. (RZhMekh, 9/75, 9B963)
873. Sperantov, V. V. (0). Observation of interference of polarized light by laser. Cited in IVUZ Fiz, no. 10, 1975, 157.
874. Sutorshin, V. N. (19). Accuracy of distance measurement by an optical coordinator with a dissector detector. IN: Tr 9, 131-133. (RZhRadiot, 9/75, 9Ye196)
875. Taratorkin, B. S. (149). Measuring the velocity vector of plane and axisymmetric flows in experimental hydrodynamic installations by means of optical Doppler systems. IN: Tr 10, 125-130. (RZhMekh, 9/75, 9B951)
876. Timoshenko, N. I., and A. I. Yartsev (19). Experimental study of the index of refraction of sulfur hexafluoride. IN: Tr 11, 58-64. (RZhF, 10/75, 10D1007)
877. Vasilenko, L. S., N. M. Dyuba, and M. N. Skvortsov (0). Measuring the relaxation constants of molecules by laser methods. IN: Sb 1, 56. (RZhRadiot, 10/75, 10Ye76)

878. Vedernikov, V. M., V. P. Kir'yancov, B. G. Matiyenko, and A. M. Shcherbachenko (0). Microelectronic computer unit for the IPL-2 laser displacement meter. Avtometriya, no. 5, 1975, 53-60.
879. Voitsekhovskiy, A. V., N. G. Vyalyy, A. M. Demchenko, V. F. Kovalenko, and I. Ye. Maronchuk (361). Radiative recombination in  $(\text{GaAs})_x(\text{ZnSe})_{1-x}$  solid solutions under laser excitation. FTP, no. 11, 1975, 2106-2109.
880. Yefimov, V. V., I. S. Yefimochkin, R. K. Leonov, and N. F. Taurin (0). Using a pulsed laser for electrooptic microphotography. IN: Sb 15, 47-48. (RZhFoto, 9/75, 9.46.197)
881. Yesepkina, N. A., V. Yu. Petrun'kin, I. A. Vodovatov, G. K. Vinogradov, and M. G. Vysotskiy (0). Using methods of coherent optics and holography for studying the characteristics of radiotelescopes. IN: Sb 20, 22-24. (RZhF, 10/75, 10Zh454)
882. Zakharchenko, V. M. (133). Measuring flow velocity by a laser single-beam time-transit method. IN: Tr 12, 147-151. (RZhMekh, 10/75, 10B1264)
883. Zakharov, V. M., V. I. Pavlov, and V. Ye. Rokotyan (0). Shape of optical pulses reflected from the sea surface. IN: Sb 19, 125-132. (RZhF, 9/75, 9D820)
884. Zakharov, V. M., L. N. Razumov, Ye. M. Birger, and S. P. Karlov (134). Measuring raindrops by a holographic method. Meteorologiya i gidrologiya, no. 10, 1975, 112-114.
885. Zenchenko, V. P., and E. P. Sinyavskiy (44). Line shape of interzone absorption of light in crossed electric and magnetic fields in the presence of resonant laser radiation. FTT, no. 10, 1975, 3018-3120.

886. Zeylikovich, I. S., and N. M. Spornik (7). Holographic interferometer based on a shadow instrument. OMP, no. 9, 1975, 77-78.
887. Zhilkin, V. A., and L. A. Borynyak (359). Preparation of information for automation of processes for measuring displacements by a holographic method. IN: Tr 13, 49-56. (RZhRadiot, 9/75, 9Ye258)
888. Zubarev, Ye. I., and V. M. Kulybin (19). Optical Doppler velocimeter using a unidirectional circuit for self-luminous flows. IN: Tr 3, 82-90. (RZhF, 9/75, 9D995)
889. Zubov, V. A., Ye. V. Morgunova, and B. S. Rinkevichyus (19). Space-time filtration of signals in the differential circuit of a Doppler velocimeter. IN: Tr 3, 76-80. (RZhF, 9/75, 9D996)
890. Zuyev, V. Ye., V. P. Lopasov, and M. M. Makogon (0). Tunable lasers in laser spectroscopy. IN: Sb 9, 112-117.

## G. BEAM-TARGET INTERACTION

### 1. Metal Targets

891. Anisimov, S. I., V. A. Gal'burt, and V. I. Fisher (0). Structure of the absorption zone under the action of laser radiation on a metal. ZhTF P, no. 7, 1975, 321-325. (RZhF, 9/75, 9D951)
892. Arifov, U. A., V. V. Kazanskiy, V. B. Lugovskoy, and V. A. Makarenko (202). Some features of emission pulses induced by regular pulsations of ruby laser radiation. IAN Uz, no. 4, 1975, 49-52.

893. Arzuov, M. I., A. I. Barchukov, F. V. Bunkin, V. I. Konov, and A. A. Lyubin (0). Violent surface oxidation of metals and accompanying phenomena under the action of c-w CO<sub>2</sub> laser radiation. KE, no. 8, 1975, 1717-1724. (LC)
894. Devyatykh, G. G., B. A. Nesterov, G. A. Maksimov, and N. V. Larin (0). Structure of the halo formed by laser pulses on the surface of a target. ZhTF P, no. 7, 1975, 318-320. (RZhF, 10/75, 10Ye1031)
895. Dneprovskiy, V. N., and A. A. Shchuka (0). Rhenium films obtained by laser sputtering, and their properties. IN: Sb 21, 166-167. (RZhMetal, 9/75, 9I727)
896. Gagarin, A. P., V. V. Druzhinin, N. A. Raba, and S. V. Maslenikov (0). Destructive action of thermal radiation from a laser erosional plasma under extended shielding conditions. ZhTF P, no. 7, 1975, 311-315. (RZhF, 9/75, 9D952)
897. Gazuko, I. V., I. M. Gryaznov, and L. I. Mirkin (0). Destruction and thermal disintegration of transition metal carbides under the action of a laser beam. FiKhOM, no. 6, 1975, 8-12.
898. Golubev, G. P., I. Ya. Ivantsov, A. M. Pavlov, A. K. Semenov, and V. P. Filippov (0). Study of pressure from the action of laser radiation on metals. ZhTF P, no. 15, 1975, 711-713.
899. Khokhlov, N. P., Yu. V. Lisitsyn, V. N. Mineyev, and A. G. Ivanov (0). Destruction of metal foil by laser radiation. FiKhOM, no. 6, 1975, 3-7.
900. Kovalev, V. I., V. V. Morozov, S. I. Sagitov, and F. S. Fayzullov (0). Study of the radiation resistance of gold coatings. KE, no. 7, 1975, 1527-1535. (LC)

901. Kozlova, N. N., A. I. Petrukhin, and V. A. Sulyayev (0). Experimental study of the onset of vaporization and origin of a plasma layer under the action of laser radiation on metals in various gases. KE, no. 7, 1975, 1390-1394. (LC)
902. Lupacheva, L. A., and A. G. Pertsev (0). Use of laser technology for solving technological problems in electric lighting production. IN: Sb 22, 28. (RZhElektrotekh, 21V, 11/75, 11V17)
903. Mikhaylov, B. S. (0). Features of the interaction of low intensity optical radiation with thin metal films in the millisecond range. Cited in FiKhOM, no. 5, 1975, 141.
904. Nguyen Tkho Vyong (0). Phenomenological mechanism of destruction of a metal under the action of laser radiation. ZhPS, v. 23, no. 4, 1975, 586-589.
905. Plyatsko, G. V., A. I. Porter, G. A. Preys, and M. I. Moysa (303). Effect of laser processing of steel on its wear-resistance in a corrosive medium. FiKhOM, no. 5, 1975, 91-94.
906. Rykalin, N. N., A. A. Uglov, and M. M. Nizametdinov (22). Features of interaction of laser radiation with materials at high pressures of the ambient medium. ZhETF, v. 69, no. 2, 1975, 722-732.
907. Vavrouch, D., F. Slamenik, and R. Chudoba (NS). Laser drilling machine. Jemna mechanika a optika, no. 11, 1975, 329-333.
908. Veyko, V. P., A. I. Kaydanov, M. N. Libenson, V. M. Yurkevich, and Ye. B. Yakovlev (0). Mechanisms of destruction of thin metal films under the action of laser radiation. Cited in FiKhOM, no. 5, 1975, 141.

909. Zhiryakov, B. M., N. I. Popov, A. A. Samokhin, and A. K. Fannibo (0). Pulsed regime of developed vaporization of a metal under the action of laser radiation. ZhTF, P, no. 15, 1975, 731-734.
910. Zhiryakov, B. M., and A. K. Fannibo (16). Method for welding materials by a laser beam. Otkr izobr, no. 38, 1975, 230626.

## 2. Dielectric Targets

911. Andreyev, V. G., A. A. Orlov, and P. I. Ulyakov (0). Mechanism of focused destruction of glass by laser radiation. Cited in FiKhOM, no. 5, 1975, 141-142.
912. Buzhinskiy, I. M., and A. Ye. Pozdnyakov (0). Relationship between the thresholds of destruction of glass by laser pulses of varying duration. KE, no. 7, 1975, 1550. (LC)
913. Dlugunovich, V. A., V. A. Zhdanovskiy, and V. N. Snopko (0). Measuring the reflectivity of dielectrics during laser heating of their surface. ZhPS, v. 23, no. 6, 1975, 969-974.
914. Gulbinas, I. A., E. K. Mal dutis, and Yu. I. Reksnis (0). Measuring  $dn^e/dT$  in ADP crystals during their local heating by laser radiation. ZhTF P, no. 11, 1975, 505-508. (RZhF, 10/75, 10D1052)
915. Kikin, P. Yu. (0). Effect of diffraction from internal fractures on end-face damage of ruby crystals. KE, no. 10, 1975, 2348-2350. (LC)
916. Kovalenko, V. S., V. P. Kotlyarov, V. P. Dyatel, V. I. Yepifanov, and K. I. Proskuryakov (0). Use of a laser beam for dividing diamond crystals. EOM, no. 5, 1975, 13-15.

917. Makshantsev, B. I., and A. A. Kovalev (0). Action of laser radiation on solid transparent dielectrics. KE, no. 7, 1975, 1552. (LC)
918. Vlasov, D. V., Yu. S. Kas'yanov, V. V. Korobkin, and I. L. Fabelinskiy (1). Destruction of transparent glass by stimulated Brillouin scattering radiation. FTT, no. 12, 1975, 3574-3578.
919. Zakharov, S. I. (0). Cumulative ionization and breakdown in dielectrics under the action of a single optical pulse at low and high temperatures. Cited in FiKhOM, no. 5, 1975, 140-141.

### 3. Semiconductor Targets

920. Bonch-Bruyevich, A. M., B. A. Raykhman, and V. N. Smirnov (0). Anisotropy in the absorption of polarized light in semiconductor crystals, caused by the action of a strong optical-frequency electrical field. ZhTF P, no. 17, 1975, 775-779.
921. Fedorenko, L. L., V. K. Malyutenko, and S. S. Bolgov (6). Activation of photoconductivity in InSb by laser irradiation. UFZh, no. 12, 1975, 2040-2043.
922. Kostyukova, Ye. P., L. I. Mirkin, and K. N. Nishchev (364). X-ray topographical study of structural changes in silicon single crystals under the action of a laser beam. FTT, no. 9, 1975, 2635-2639.
923. Nguyen Min' Khiyen (87). Nonstationary theory of thermal breakdown of semiconductors under laser radiation. ZhTF, no. 10, 1975, 2105-2108.
924. Obukhov, L. V., Ye. G. Prutskov, and V. A. Yanushkevich (0). Microstructure and movement of dislocations in silicon under laser excitation. FiKhOM, no. 2, 1975, 34-38. (LC)

925. Shtyrkov, Ye. I., I. B. Khaybullin, M. M. Zaripov, M. F. Galyatudinov, and R. M. Bayazitov (38). Local laser annealing of ion-doped semiconductor layers. FTP, no. 10, 1975, 2000-2002.

#### 4. Miscellaneous Studies

926. Agranovich, V. M. (72), and I. Y. Lalov (Bulgarian). Inelastic scattering of neutrons in crystals by laser photons and excitons. ZhETF, v. 69, no. 2, 1975, 647-655.
927. Alekseyev, P. A., B. M. Zhiryakov, and A. K. Fannibo (0). Dynamics of the stressed state of matter under laser action. KE, no. 8, 1975, 1813. (LC)
928. Fedoseyev, D. V., G. G. Lopatina, I. G. Varshavskaya, A. V. Lavrent'yev, and S. V. Bantsekov (287). Use of heating by an infrared laser for thermophysical measurements. TVT, no. 4, 1975, 883-884.
929. Geguzin, Ya. Ye., A. K. Yemets, and V. G. Kononenko (34). Dislocation mechanism for the formation of a macroscopic band in a crystal in the focus of pulsed laser excitation. FTT, no. 10, 1975, 2984-2988.
930. Kolokolov, A. A. (0). Reflection of plane waves from an amplifying medium. ZhTF P, no. 11, 1975, 660-662. (RZhF, 10/75, 10D941)
931. Kondrat'yev, V. N., and I. V. Nemchinov (0). Self-similar problem on the motion of a plane layer of a heated substance with an arbitrary equation of state. ZhPMTF, no. 5, 1975, 136-145.
932. Koshelev, K. N., S. V. Chekalin, and S. S. Churilov (0). Optimal focusing of laser radiation on the surface of a solid target. KE, no. 7, 1975, 1593. (LC)

933. Kozlov, B. M., A. A. Samokhin, and A. B. Uspenskiy (1).  
Numerical analysis of a pulsed vaporization regime of a condensed substance under the action of laser radiation. KE, no. 9, 1975, 2061-2063.
934. Kozlova, N. N., I. E. Markovich, I. V. Nemchinov, A. I. Petrukhin, Yu. Ye. Pleshakov, V. A. Rybakov, and V. A. Sulyayev (276). Experimental study on the interaction of laser radiation with an obstacle in air. KE, no. 9, 1975, 1930-1942.
935. Lyubov, B. Ya., and E. N. Sobol' (0). Nonstationary vaporization of a semi-bounded object under the action of a high power energy flux. FiKhOM, no. 5, 1975, 3-8.
936. Malutis, E. K., Yu. I. Reksnis, and S. V. Sakalauskas (50). Contribution of thermoelastic stresses to  $dn/dT$  in crystals of hexagonal and trigonal symmetry heated by laser radiation. KE, no. 11, 1975, 2493-2498. (LC)
937. Nguyen Min' Khiyen (0). A method for solving problems of thermal breakdown. ZhTF P, no. 7, 1975, 349-352. (RZhF, 10/75, 10D1171)
938. Tribel'skiy, M. I. (0). Surface shape of the liquid phase during melting of a solid by a moderate intensity laser beam. Cited in FiKhOM, no. 5, 1975, 139.
939. Yanushkevich, V. A. (0). Criteria for the possibility of forming shock waves from the action of laser radiation on the surface of absorbing condensed media. FiKhOM, no. 5, 1975, 9-11.
940. Zaporozhchenko, V. A. (0). Some features of reflection of high power laser radiation from solutions of complex molecules. ZhPS, v. 23, no. 5, 1975, 904-906.

941. Zon, B. A. (0). R-f radiation generated by a focused laser beam in a resonant medium. ZhTF P, no. 7, 1975, 315-318.  
(RZhRadiot, 9/75, 9Ye340)

H. PLASMA GENERATION AND DIAGNOSTICS

942. Afanas'yev, Yu. V., N. G. Basov, P. P. Volosevich, Ye. G. Gamaliy, O. N. Krokhin, S. P. Kurdyumov, Ye. I. Levanov, V. B. Rozanov, A. A. Samarskiy, and A. N. Tikhonov (0). Analysis of the physical processes in laser targets, for experiments with a laser energy level of 200-300 joules. KE, no. 8, 1975, 1816. (LC)
943. Afrosimov, V. V., V. P. Belik, S. V. Bobashev, and L. A. Shmayenok (4). Absolute measurement of photon fluxes from a laser plasma in the vacuum ultraviolet region. ZhTF P, no. 18, 1975, 851-854.
944. Anisimov, S. I., M. F. Ivanov, P. P. Pashinin, and A. M. Prokhorov (1). Gas-coated target for laser-induced thermonuclear reactions. ZhETF P, v. 22, no. 6, 1975, 343-346.
945. Belokon', V. A. (?). Nonisentropic supercompressive flow, determined analytically. ZhTF P, no. 18, 1975, 824-828.
946. Berezhnyy, V. L., and V. I. Kononenko (0). Using a submillimeter laser as an interferometer for studying a degenerating plasma. ZhTF, no. 10, 1975, 2116-2118.
947. Burakov, V. S., V. V. Zheludok, and P. A. Naumenkov (3). Change in the transmissivity of a plasma under the action of laser radiation. IAN B, no. 5, 1975, 82-86.

948. Burunov, Ye. A., G. M. Malyshev, G. T. Razdobarin, V. V. Semenov, and I. P. Folomkin (4). Plasma diagnostics of a laser spark, using the collective scattering spectrum. ZhTF, no. 9, 1975, 1878-1883.
949. Dymshits, Yu. I. (0). Determining the optical thickness of a plasma flare by measuring its absolute spectral brightness. ZhTF P, no. 12, 1975, 554-558.
950. Dymshits, Yu. I., and V. G. Neverov (0). Direct experimental observation of the shielding action of a plasma flare. ZhTF P, no. 12, 1975, 558-562.
951. Gacek, A., S. Kaliski, and A. Sarzynski (NS). Averaged description of electron thermal waves with allowance for hot electrons. Biul. WAT J. Dabrowskiego, v. 23, no. 9, 1974, 3-17. (RZhMekh, 7/75, 7B71)
952. Gamaliy, Ye. G., V. B. Rozanov, and N. M. Sobolevskiy (1). Possibility of diagnosing the density of a target for laser thermonuclear fusion, according to the scattering of thermonuclear neutrons in the target material. KE, no. 11, 1975, 2537-2540. (LC)
953. Gluchowski, W., K. Jach, S. Kaliski, T. Rusinowisz, and R. Swierczynski (NS). Quasi-self-similar approach to the problem of concentric shock compression of a plasma. Proceedings of Vibration Problems. Polish Academy of Sciences, v. 15, no. 4, 1974, 321-337. (RZhMekh, 7/75, 7B73)
954. Gudilin, I. A., V. Ye. Mitsuk, V. A. Chernikov (2). Study of the absorption of laser radiation in an optical spark. VMU, no. 5, 1975, 617-619.

955. Gus'kov, S. Yu., O. N. Krokhin, and V. B. Rozanov (1).  
Spectra and absolute output of charged particles as the result of a  
laser-triggered fusion reaction. KE, no. 10, 1975, 2315-2324. (LC)
956. Kaliski, S. (NS). Conditions of compatibility between self-similarity  
and boundary value solutions of concentric shock wave problems.  
BAPS, no. 7, 1975, 341(579)-344(582).
957. Kaliski, S. (NS). Problem of a supersonic concentric self-similar  
thermal wave in gas. BAPS, no. 8, 1975, 421(681)-426(686).
958. Kaliski, S. (NS). Conduction-heated plane thermal waves at a  
constant velocity in a plasma. Biul. WAT J. Dabrowskiego,  
v. 23, no. 1, 1974, 3-7. (RZhMekh, 7/75, 7B67)
959. Kaliski, S. (NS). Averaged equations of concentric homothermal  
shock compression of one-temperature plasma. Proceedings of  
Vibration Problems. Polish Academy of Sciences, v. 15, no. 4,  
1974, 261-269. (RZhMekh, 7/75, 7B72)
960. Klimkin, V. F., and R. I. Soloukhin (0). Triggering the detonation  
of a high power laser spark in a gas by shock wave heating.  
IN: Sb 23, 47-49. (Letopis' zhurnal'nykh statey, 45/75, 150725)
961. Kologrivov, A. A., Yu. A. Mikhaylov, G. V. Sklizkov, S. I.  
Fedotov, A. S. Shikanov, and M. R. Shpol'skiy (1).  
Use of UF-R and UF-VR photofilms for diagnostics of a laser plasma  
according to c-w x-radiation in the 0.1-1 nm spectral interval.  
KE, no. 10, 1975, 2223-2230. (LC)
962. Koval'chuk, Yu. V., G. V. Ostrovskaya, and N. A. Pobedonostseva (0).  
Use of a dye laser for obtaining absorption spectra of a plasma.  
ZhTF P, no. 10, 1975, 468-471. (RZhF, 11/75, 11D1203)

963. Kovalev, I. D., N. V. Larin, and G. A. Maksimov (297).  
Mass-spectrometric study of ion acceleration during the  
disintegration of a laser plasma of binary compounds. ZhTF P,  
no. 17, 1975, 798-801.
964. Peregudov, G. V., Ye. N. Ragozin, and V. A. Chirkov (0).  
High-intensity focused x-ray spectograph for studying a laser  
plasma. KE, no. 8, 1975, 1844. (LC)

### III. MONOGRAPHS

965. Apollonov, V. V., A. I. Barchukov, V. Yu. Khomich, and A. V. Shirkov (1). Izmereniye koeffitsiyentov pogloshcheniya zerkal'nykh poverkhnostey metallov na dline volny  $\lambda = 10,6 \text{ mk}$ . (Measuring the coefficients of absorption in mirror surfaces of metals at 10.6  $\mu$ ). Fizicheskiy institut AN SSSR. Preprint, no. 52, 1975, 14 p. (RZhF, 11/75, 11D1000)
966. Avtonomov, V. P., Ye. T. Antropov, N. N. Sobolev, and Yu. V. Troitskiy (1). Primeneniye pogloshchayushchikh i difraktsionnykh selektorov dlya vydeleniya vrashchatel'nykh liniy v  $\text{CO}_2$  lazere i aktivnaya stabilizatsiya chastoty (Use of absorption and diffraction selectors for isolating rotational lines in a  $\text{CO}_2$  laser and the active stabilization frequency). AN SSSR. Fizicheskiy institut. Preprint, no. 81, 1974, 18 p. (KLDV, 4/75, 6670)
967. Bankovskiy, A. S. (317). Pribory kvantovoy elektroniki. Chast' 1. Fizicheskiye osnovy protsessov vzaimodeystviya elektromagnitnogo izlucheniya s veshchestvom (Quantum electronic devices. Part 1. Physical bases for the processes of interaction of electromagnetic radiation with matter). Saratov, 1975, 51 p. (KL, 40/75, 35771)
968. Basov, N. G., ed. (1). Teoreticheskiye problemy spektroskopii i gazodinamicheskikh lazerov (Theoretical problems of spectroscopy and gasdynamic lasers). AN SSSR. Fizicheskiy institut. Trudy, no. 83, 1975, 216 p. (KL, 45/75, 40197)
969. Biryukov, A. S., A. Yu. Volkov, A. I. Demin, Ye. M. Kudryavstev, Yu. A. Kulagin, and N. N. Sobolev (1). Vliyaniye parov vody na pokazatel' usileniya v gazodinamicheskom  $\text{N}_2\text{O}$  lazere (Effect of water vapor on the gain in a gasdynamic  $\text{N}_2\text{O}$  laser). Fizicheskiy institut AN SSSR. Preprint, no. 81, 1975, 20 p. (RZhF, 11/75, 11D1146)

970. Bogdankevich, O. V. (0). Poluprovodnikovyye lazery (Semiconductor lasers). Novoye v zhizni, nauke, tekhnike. Seriya Fizika, no. 12, Moskva, Znaniye, 1975, 64 p.
971. Brashevan, Yu. V., Ye. M. Pavlov, and G. A. Anikanov (24). Metod otsenki nekotorykh parametrov opticheskogo zapominayushchego ustroystva na stadii proyektirovaniya (Method for estimating various parameters of an optical memory in the planning stage). Moskovskoye vyssheye tekhnicheskoye uchilishche. Deposit at TsNIITEipriborostroyeniya, no. 350, 14 April 1975, 11 p. (RZhF, 9/75, 9D1240)
972. Delone, N. B. (1). Spektr kvazistatsionarnykh sostoyaniy sistemy atom + sil'noye svetoye pole (Spectrum of the quasistationary states of the atom + strong optical field system). AN SSSR. Fizicheskiy institut. Preprint, no. 146, 1974, 18 p. (KLDV, 8/75, 13797)
973. Denisyuk, Yu. N., and Yu. I. Ostrovskiy, eds. (0). Opticheskaya golografiya (Optical holography). Leningrad, Nauka, 1975, 116 p. (RZhF, 11/75, 11D1212)
974. Fekeshgazi, I. V., and V. F. Kogdenko (0). Nelineynaya optika poluprovodnikov (Nonlinear optics of semiconductors). Obshchestvo Znaniye UkrSSR. Seriya 7. V laboratorii uchenykh, no. 3, Kiyev, 1975, 64 p. (KL, 37/75, 32910)
975. Gordin, M. P., A. V. Sokolov, and G. M. Strelkov (15). Izmeneniye prozrachnosti vodnogo aerozolya prosvetlyayemogo luchom CO<sub>2</sub> lazera na dlinakh voln 0,63 i 1,06 mk (Change in the transparency of an aqueous aerosol dispersed by a 0.63 and 1.06 μ CO<sub>2</sub> laser beam). Institut radiotekhniki i elektroniki AN SSSR. Preprint, no. 6(186), 1975, 20 p. (RZhF, 9/75, 9D811)

976. Gordin, M. P., A. V. Sokolov, and G. M. Strelkov (15).  
Ob oslablenii izlucheniya CO<sub>2</sub> lazera, diffuzionno isparayushchimsya  
vodnym aerozolem (Attenuation of CO<sub>2</sub> laser radiation by a diffusely  
vaporizable aqueous aerosol). AN SSSR. Institut radiotekhniki i  
elektroniki. Preprint, no. 22(171), 1974, 32 p. (KLDV, 2/75, 2396)
977. Gus'kov, S. Yu. (1). Kineticheskiye protsessy v lazernoy plazme  
(Kinetic processes in a laser plasma). Fizicheskiy institut AN SSSR.  
Laboratoriya kvantovoy radiofiziki. Preprint, no. 82, 1975, 65 p.  
(RZhF, 11/75, 11G186)
978. Kaminskiy, A. A. (0). Lazernyye kristally (Laser crystals).  
Moskva, Nauka, 1975, 256 p. (RZhF, 11/75, 11D1069)
979. Kapralova, G. A., V. A. Katranovskiy, Ye. N. Trofimova, and  
A. M. Chaykin (67). Issledovaniye fotokhimicheskoy reaktsii fторa s  
vodorodom vblizi vtorogo predela samovosplameneniya (Study of the  
photochemical reaction of fluorine with hydrogen near the second  
limit of spontaneous combustion). Institut khimicheskoy fiziki  
AN SSSR. Preprint. 1975, 19 p. (RZhKh, 19AB, 23/75, 23B1298)
980. Konson, A. S., and N. T. Savrukov (0). Primeneniye i ekonomichnost'  
golograficheskoy tekhniki (Application and economy of holographic  
technology). Leningrad, Znaniye, Seriya Progressivnyye metody  
obrabotka metallov i splavov, 1975, 26 p. (KLDV, 10/75, 17199)
981. Kravtsov, Yu. A., and V. I. Tatarskiy (128). Statisticheskiye  
yavleniya pri difraktsii voln (Statistical phenomena in the diffraction  
of waves). Ryazanskiy radiotekhnicheskiy institut. Ryazan', 1975,  
102 p. (RZhF, 9/75, 9Zh100)
982. Laboratornyye raboty po golografii (Laboratory work on holography).  
Minsk, BGU, 1975, 135 p. (Russian Book List, 9-10/75, 571)

983. Lebedev, D. S., ed. (0). Ikonika. Tsifrovaya golografiya. Obrabotka izobrazheniy (Iconics. Digital holography. Image processing). Moskva, Nauka, 1975, 147 p. (Cited in TKiT, no. 11, 1975, 90)
984. Letokhov, V. S., and V. P. Chebotarev (0). Printsipy nelineynoy lazernoy spektroskopii (Principles of nonlinear laser spectroscopy). Moskva, Nauka, 1975, 279 p. (RZhF, 11/75, 11D229)
985. Lobkova, L. M. (0). Statisticheskaya teoriya sverkhvysokikh i opticheskikh chastot. Vliyaniye atmosfernoy turbulentnosti na kharakteristiki antenn (Statistical theory of superhigh and optical frequency antennas. Effect of atmospheric turbulence on antenna characteristics). Moskva, Svyaz', 1975, 176 p.
986. Marchevskiy, F. N., and V. L. Strizhevskiy (228). Teoriya kombinatsionnogo rasseyaniya sveta pri vozbuzhdenii sverkhkorotkimi lazernymi impul'sami (Theory of Raman scattering under excitation by ultrashort laser pulses). Institut teoreticheskoy fiziki AN UkrSSR. Preprint ITF-75-9R, 1975, 37 p. (RZhF, 10/75, 10D1061)
987. Rodionov, M. K. (106). Modulyatsiya izlucheniya OKG (Modulation of laser radiation). Part 2. Kiyevskiy politekhnicheskiy institut, 1974, 93 p. (KLDV, 9/75, 7421)
988. Romanov, G. S., and V. K. Pustovalov (3). Prosvetleniye oblachnoy sredy, soderzhshchey kapli vody, pod deystviyem intensivnogo monokhromaticheskogo izlucheniya (Dispersal of a cloud medium containing water droplets under the action of intense monochromatic radiation). Institut fiziki AN BSSR. Minsk, 1975, 35 p. (RZhGeofiz, 10/75, 10B36)

989. Shvarts, K., and A. Ozol (63). Golografiya -- revolyutsiya v optike (Holography: a revolution in optics). Riga, Zinatne, 1975, 208 p. (KL, 39/75, 34828)
990. Sperantov, V. V. (0). Nablyudenije interferentsii polyarizovannogo sveta s pomoshch'yu lazera (Observation of interference of polarized light by means of a laser). Deposit at VINITI, no. 2442-75, Tomsk, 13 August 1975, 8 p. (RZhF, 11/75, 11D908)
991. Suminov, V. M. (0). Novyye metody proizvodstva i kontrolya s primeneniem lazera (New methods of production and control using a laser). Moskva, Mashinostroyeniye, 1975, 55 p. (KL, 40/75, 35788)
992. S'yedugin, V. V., and Yu. M. Shavrukov (24). Elektrodinamicheskiye kharakteristiki sistemy VCh-vozbuzhdeniya gazovykh OKG (Electrodynamic characteristics of a high-frequency excitation system for gas lasers). Moskovskoye vyssheye tekhnicheskoye uchilishche. Deposit at TsNIITEIPriborostroyeniya, no. 379, 29 May 1975, 16 p. (RZhF, 10/75, 10D1219)
993. Veyko, V. P., and B. M. Yurkevich (0). Podgonka chastoty kvartsevykh rezonatorov pri pomoshchi lazernogo izlucheniya (Frequency adjustment of quartz resonators by high power laser radiation). Leningradskiy dom nauchno-tehnicheskoy propagandy, Seriya Mekhanizatsiya i avtomatizatsiya proizvodstvennykh protsessov i ustanovok, 1974, 31 p. (LC)
994. Vinetskiy, V. L., and N. V. Kukhtarev (5). Teoriya provodimosti, navodimoy pri zapisi golograficheskikh reshetok v nemetallicheskikh kristallakh (Theory of conductivity induced during the recording of holographic lattices in nonmetallic crystals). Institut fiziki AN UkrSSR. Kiiev, 1975, 21 p. (RZhF, 10/75, 10D1273)

995. Sbornik tezisov II Vsesoyuznogo simpoziuma po fizike gazovykh lazerov, Novosibirsk, 16-18 iyunya 1975 g. (Collection of summaries of the 2nd All-Union Symposium on the Physics of Gas Lasers, Novosibirsk, 16-18 June 1975). AN SSSR. Otdeleniye obshchey fiziki i astronomii. Sibirskoye otdeleniye, Fizicheskiy institut AN SSSR, Institut fiziki poluprovodnikov SOAN, Institut spektroskopii AN SSSR. Preprint, no. 63, Moskva, 1975, 165 p. (RZhRadiot, 10/75, 10Ye54)
996. III Vsesoyuznyy simposium po rasprostraneniyu lazernogo izlucheniya v atmosfere. Tezisy dokladov (Third All-Union Symposium on the Propagation of Laser Radiation in the Atmosphere. Summaries of the reports). Tomsk, 1975, 297 p.
997. Yezhov, G. I. (15). Sobstvennyye i nesobstvennyye volny v dielektricheskikh sloistykh volnovodakh opticheskogo diapazona. Obzor (Natural and artificial waves in dielectric layered waveguides in the optical range. Review). Institut radiotekhniki i elektroniki AN SSSR. Preprint, no. 8(188). 1975, 28 p. (RZhF, 9/75, 9D1041)
998. Zuyev, V. Ye., ed. (78). Rasprostraneniye opticheskikh voln v atmosfere (Propagation of optical waves in the atmosphere). Novosibirsk, Nauka, 1975, 252 p.

#### IV. SOURCE ABBREVIATIONS

BAPS	-	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
DAN Arm	-	Akademiya nauk Armyanskoy SSR. Doklady
DAN Az	-	Akademiya nauk Azerbaydzhanской SSR. Doklady
DAN B	-	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	-	Akademiya nauk SSSR. Doklady
DBAN	-	Bulgarska akademiya na naukite. Doklady
EOM	-	Elektronnaya obrabotka materialov
FAiO	-	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	-	Fizika goreniya i vzryva
FiKhOM	-	Fizika i khimiya obrabotka materialov
FTP	-	Fizika i tekhnika poluprovodnikov
FTT	-	Fizika tverdogo tela
GiK	-	Geodeziya i kartografiya
IAN B	-	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Fiz	-	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Uz	-	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
I-FZh	-	Inzhenerno-fizicheskiy zhurnal
IT	-	Izmeritel'naya tekhnika
IVUZ Fiz	-	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Geod	-	Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka
IVUZ Priboro	-	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	-	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika

IVUZ Radiofiz	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	Kvantovaya elektronika
KiK	Kinetika i kataliz
KL	Knizhnaya letopis'
KLDV	Knizhnaya letopis'. Dopolnitel'nyy vypusk
Kristal	Kristallografiya
LC	Received at Library of Congress
MZhiG	Akademiya nauk SSSR. Izvestiya. Mekhanika zhidkosti i gaza
NM	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	Optika i spektroskopiya
OMP	Optiko-mekhanicheskaya promyshlennost' Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
Otkr izobr	Postupy fiziki
PF	Pribory i tekhnika eksperimenta
PTE	Radiotekhnika i elektronika
RiE	Referativnyy zhurnal. Elektrotehnika i energetika
RZhElektrotekh	Referativnyy zhurnal. Fizika
RZhF	Referativnyy zhurnal. Fotokinotekhnika
RZhFoto	Referativnyy zhurnal. Geodeziya i aeros"yemka
RZhGeod	Referativnyy zhurnal. Geofizika
RZhGeofiz	Referativnyy zhurnal. Khimiya
RZhKh	Referativnyy zhurnal. Mekhanika
RZhMekh	Referativnyy zhurnal. Metallurgiya
RZhMetal	Referativnyy zhurnal. Radiotekhnika
RZhRadiot	Sbornik. Vsesoyuznyy simpozium po fizike gazovykh lazerov. 2nd. Novosibirsk, 16-18 June 1975. Moskva, 1975.
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- Sb2 - Spektroskopiya i yeye primeneniye v geofizike i khimii. Novosibirsk, Nauka, 1975.
- Sb3 - Elektronika, no. 1, Ryazan'. 1974.
- Sb4 - Opticheskaya i elektroopticheskaya obrabotka informatsii. Moskva, Nauka, 1975.
- Sb5 - Vsesoyuznyy simpozium po rasprostraneniyu lazernogo izlucheniya v atmosfere. 3rd. Tezisy dokladov. Tomsk, 1975.
- Sb6 - Fizika zhidkogo sostoyaniya, no. 3, 1975.
- Sb7 - Sintez, analiz i struktura organicheskikh soyedineniy, no. 6, Tula, 1974.
- Sb8 - Kvantovaya khimiya. Kishinev, Shtiintsa, 1975.
- Sb9 - Rasprostraneniye opticheskikh voln v atmosfere. Novosibirsk, Nauka, 1975.
- Sb10 - Kompleksnyye issledovaniya v Mirovom okeane. Moskva, 1975.
- Sb11 - Metody i sredstva tochnykh distantsionnykh izmereniy parametrov bystroperekayushchikh protsessov. Moskva, 1975.
- Sb12 - Radiotekhnika, no. 33, 1975.
- Sb13 - Poluchenije i svoystva tonkikh plenok, no. 2, Kiyev, 1974.
- Sb14 - Sposoby zapisi informatsii na besserebryanykh nositelyakh, no. 6, 1975.
- Sb15 - Voprosy metrologii i metody optiko-fizicheskikh izmereniy, Moskva, Izd-vo standartov, 1975.
- Sb16 - Izmereniye napryazheniy v massive gornoj parody. Part 2-3, Novosibirsk, 1974.
- Sb17 - Voprosy teorii i praktiki sudovykh energeticheskikh ustanovok. Dal'novostochnyy politekhnicheskiy institut. Vladivostok, 1974.
- Sb18 - Preobrazovatel'naya i elektroizmeritel'naya tekhnika. Kiyev, Naukova dumka, 1975.
- Sb19 - Nekontaktnyye metody izmereniya okeanograficheskikh parametrov. Moskva, Gidrometeoizdat, 1975.

- Sb20 - Vsesoyuznaya konferentsiya po radioastronomii. 8th. Tezisy dokladov. Pushchino, 1975.
- Sb21 - Issledovaniy i primeneniye splavov reniya. Moskva, Nauka, 1975.
- Sb22 - Respublikanskaya konferentsiya molodykh spetsialistov po svetotekhniki i istochnikam sveta. 7th. Tezisy dokladov. Saransk, 1974.
- Sb23 - Aerofizicheskiye issledovaniya, no. 3, 1974.
- TKiT - Tekhnika kino i televideniya
- Tr1 - Moskovskiy energeticheskiy institut. Trudy, no. 231, 1975.
- Tr2 - AN SSSR. Fizicheskiy institut. Trudy, no. 81, 1975.
- Tr3 - Moskovskiy energeticheskiy institut. Trudy, no. 222, 1975.
- Tr4 - Severo-Zapadnyy zaочnyy politekhnicheskiy institut. Trudy, no. 29, 1975.
- Tr5 - Trudy metrologicheskikh institutov SSSR. VNII metrologii, no. 171(231), 1975.
- Tr6 - Yerevanskiy politekhnicheskiy institut. Mezhvuzovskiy sbornik nauchnykh trudov. Stroitel'stvo i arkhitektura, no. 1, 1974.
- Tr7 - Moskovskiy aviatsionnyy institut. Trudy, no. 311, 1975.
- Tr8 - Trudy metrologicheskikh institutov SSSR. VNII fiziko-tehnicheskikh i radiotekhnicheskikh izmereniy, no. 149(209), 1974.
- Tr9 - Moskovskiy energeticheskiy institut. Trudy, no. 230, 1975.
- Tr10 - Leningradskiy korablestroitel'nyy institut. Trudy, no. 93, 1974.
- Tr11 - Moskovskiy energeticheskiy institut. Trudy, no. 234, 1975.
- Tr12 - Tsentral'nyy aerogidrodinamicheskiy institut. Uchenyye zapiski, v. 6, no. 2, 1975.
- Tr13 - VNII transportnogo stroitel'stva. Trudy, no. 92, 1974.

TVT	-	Teplofizika vysokikh temperatur
UFN	-	Uspekhi fizicheskiy nauk
UFZh	-	Ukrainskiy fizicheskiy zhurnal
VMU	-	Moskovskiy universitet. Vestnik. Seriya fizika, astronomiya
ZhETF	-	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	-	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFIK	-	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPMTF	-	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	-	Zhurnal prikladnoy spektroskopii
ZhTF	-	Zhurnal tekhnicheskoy fiziki
ZhTF P	-	Pis'ma v Zhurnal tekhnicheskoy fiziki

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